Materialism and perceptual experience

A thesis by William Donald Ramsay, B.A., for the degree of Ph.D in philosophy, submitted to the University of Warwick. It has been written as a result of research conducted by the author in the University of Warwick Department of Philosophy, and has been completed for submission to the University in the month of March 1985.

Contents

Acknowledgements

I wish to record my thanks to Prof. D.B. Locke and Dr. R. Trigg for their advice and guidance in their capacity as supervisors during the time I have been researching and preparing this thesis.

## Abbreviations

Below are listed the abbreviations used. Brief explanations of their meanings are given, together with the locations at which these are further explained.

A1, A2, A3, A4: propositions constituting the Acquaintance Analysis of perceptual experience (pp 81-82).

CSO: The chicken sexer objection (Ch.3, Sec.6).

D1: Provisional definition of materialism offered in Chapter 1 (p.23).

DM: Definition of materialism adopted in Chapter 1 for future use (p.29).

EM: Eliminative Materialism (Ch.5).

GPA: The Givenness of Perceptual Acquaintance (p.139).

GPB: The Givenness of Perceptual Beliefs (pp145; 156).

OC: The ostensive tie conception of the meaning of descriptive terms (Ch.10, Secs. 2, 3, 4).

OCP: The 'Ostensive Conception' Proof (Ch.10, Secs. 2, 3, 4).

PKP: The Possession of Knowledge Proof (Ch.9, Sec.3).

SEM: Strong Eliminative Materialism (p.125).

WEM: Weak Eliminative Materialism (p.126).

# Materialism and perceptual experience


## Summary

The present work is a defence of scientific materialism. It begins by arguing in the face of received criticism, that it does appear possible to define the theory such that it merits serious attention. The main obstacle for the theory is then identified as the fact that our perceptual experience suggests that there are constituents in the world that it cannot allow - in particular, the unanalysable, indefinable qualia that characterise our experience of Secondary Qualities and sensations, and, also, sensations located where there is no corresponding physical phenomenon. Two main approaches to the problems these items pose are identified. The first is the Analytical Approach, which claims that existing concepts relating to perceptual experience may be analysed so as to avoid conflicts with materialism. Such analyses fail, however - notably because they cannot deal satisfactorily with the distinction between ordinary conscious perceptual experiences and unusual, and arguably unconscious, perceptual episodes, so favouring the second approach, that of Eliminative Materialism. An attempt is made, first, to present a coherent formulation of this defence in the light of recent discussion, and attention then focusses on its central tenet, that we may revise our beliefs about the content of perceptual experience to avoid conflict with materialism. The main reason for opposing the latter view is the idea that the beliefs concerned are indubitable, but then repeated attempts to vindicate their indubitability, based on a sufficiently strong understanding of this notion, are found here to fail. This enables a Kantian account of perceptual experience, finally, to be presented that is not only compatible with materialism, but also retains perceptual experience as a distinctly conscious occurrence, and explains why it should seem there are items in the world that materialism cannot allow, without entailing that any really exist.

# CHAPTER 1

## A Definition of Materialism

### 1. Summary of Chapter

At the outset it is noted that the defence of materialism has tended to focus on whether the theory can come to terms with certain items that feature in perceptual experience, principally sensations and 'phenomenal qualities' or 'qualia', whose existence is incompatible with its ontological commitments. Prior to any consideration of this issue, it is necessary to address the controversial question of what is to be understood by materialism, and this is the main concern of the present Chapter. A beginning is made by indicating some of the defects that have led to the widespread rejection of the version of scientific materialism, associated with J.J.C. Smart and D.M. Armstrong, which is based upon the 'unity of science hypothesis', according to which the only account of the world that is in principle needed is that offered by physics, which deals with its fundamental constituents. This view implies that physics not only gives a sufficient account in the sense of an inventory of all the entities to be found there, but also a sufficient explanation of all that occurs. The hypothesis is criticised, first, because there are regularities both of structure and of events that physics does not embrace, and also because there are ways of describing events that are both true and meaningful that do not imply any specific physical goings on or any physical goings on at all - notably, functional descriptions.

It is, however, argued that a definition of materialism must do justice to the traditional conception of materialism as the theory that 'everything is matter and its motions', and also that it should appeal to science. A distinction is drawn between the physical and social sciences, with the former concerned with the spatial structure of the world and the behaviour of its constituents qua spatial entities, and the social sciences concerned to characterise the world in functional role terms. Materialism is then allied to the physical sciences, through a suggested definition which characterises it as a theory about the intrinsic structure of the world that claims this to consist of spatial entities. The clauses of the definition accommodate the traditional conception of materialism, and attempt to avoid criticisms that may be raised against the appeal to the physical sciences and the intrinsically spatial structure of the world.

## 2. Materialism, perceptual experience and the problem of defining 'materialism'.

Philosophical consideration of whether materialism could constitute a valid theory of the world of which man is a part has tended to focus upon the question of whether the theory is refuted by the existence of certain items that are incompatible with its ontological commitments. The items concerned are ones that feature in our conscious perceptual experience, with the result that the account that is given of this experience is crucial to the fate of materialism. By 'perceptual experience', for present purposes, is meant experiences of kinds that are had when we perceive, or seem to perceive, something in the environment or in our body; experiences that are the essential means by which we come by our judgements about how the world is at any given time. Experiences characteristic of seeing, hearing, and

other modes of sense by which we perceive the environment thus count as perceptual experiences, but we propose also to count the experience of bodily sensations as perceptual experiences - in this case intra-bodily perception, of which more will be said in the next Chapter. It is on the basis of the present understanding of perceptual experience that it may be claimed that crucial problems for materialism are posed by items contained in that experience.

Foremost among such items are ones that have been referred to collectively as 'sensations'. This class embraces not only the aforementioned bodily sensations, such as pains, but also contents of aberrant perceptual experiences - ones where the sensory mode misfunctions and fails therefore to present the world as it is - of which the usual example is afterimages. But a second class of items that has also featured prominently in philosophical discussions of materialism is that of 'phenomenal qualities'.[1] By these are meant the sense apprehended qualities or qualia that distinguish, for example, different colours from each other in our experience. Just why sensations and phenomenal qualities, or 'qualia', as we shall later refer to them, have been so central in the debate over materialism, a centrality which is acknowledged by the concern of the present work with 'materialism and perceptual experience', will be addressed in the next Chapter. There is, however, a prior question that must be considered in embarking on a discussion of materialism, and that is what precisely is to be understood by 'materialism'.

Now the definition of materialism is a controversy in philosophy in its own right. Accounts of what is meant by materialism can be criticised for being, for example, too strong, too weak, or too ad hoc - contrived merely for the purpose of setting up a specific problem that materialism must overcome. The usual examples of accounts that are considered too strong are those associated with J.J.C. Smart[2] and D.M. Armstrong[3]. They are too strong because, in Cornman's words, they 'saddle' the theory 'with the reduction of everything to entities explainable by one basic science'.[4] And no better example of an ad hoc definition may be instanced than Cornman's own one, in his book Materialism and sensations ,[5] where materialism is defined by reference to the concept of a physical property, which is in turn defined as that of a property of spatio-temporal individuals that is not such that living individuals would possess it only if living. This is arrived at with the intention of ensuring that sensations count as non-physical, and hence fall outside the ontological framework of materialism thus defined. There is then a problem for the defence of materialism posed by the existence of sensations, arising from the fact that, subject to certain qualifications, materialism is represented as claiming that spatio-temporal individuals have only physical properties.[6] But the question is why any such problem should merit serious attention when the theory in connection with which it arises has been defined precisely to ensure that it does arise. Why not simply change the definition and avoid the problem? Clearly, if problems for the defence of materialism are to be posed they must be incidental to a theory that merits attention on its own account rather than one concocted to set up those very problems.

Numerous examples of definitions of materialism that are too weak have been cited, also-weak in the sense of failing to distinguish materialism from ontological theories that it is intended to be contrasted with.[7] And this state of affairs naturally can encourage scepticism as to the possibility of an adequate definition of materialism. Thus, D.H. Mellor has 'tentatively' concluded 'that it cannot be well enough defined to make it of interest'.[8] It may, however, be noted that even if this conclusion is accepted, there are interesting and important issues that have arisen in the context of the attempt to defend the theory that would survive its demise for want of an adequate definition. Notable among these is one on which Cornman wished to focus through his ad hoc definition: whether we could dispense with talk about sensations or phenomenal properties and substitute descriptions drawn from physics or neurophysiology which do not recognise the existence of anything having the nature of sensations or phenomenal qualities as ordinarily understood, and thereby obtain a truer or more accurate description of the world. Consideration of this issue will feature prominently in the present discussion, but it will be addressed as a problem for the defence of materialism, for it will be argued in what follows that Mellor's conclusion about materialism is perhaps unduly pessimistic. The definition that will be proposed here is one that attempts to take account of the pitfalls exposed in other attempts to define materialism, while remaining faithful to the ideas that are its inspiration. It is not anticipated that the proposal will itself be immune from criticism, but it might be that something like it would suffice. The definition will emerge by way of a consideration of the criticisms that suggest that those offered by Smart and Armstrong - prominent figures in the recent debate over materialism - are indeed too strong.

3. Materialism and physics

Traditionally, materialism has been understood as claiming that 'everything is just matter and its motions'[9], and thus denying, for example, that there are two ultimate categories of substance in the world, mind and matter. Recent advocates of materialism have, however, adopted a more precise and restrictive construal of the theory based on the ontology of physics, as when J.J.C. Smart says:

> By 'materialism' I mean the theory that there is nothing in the world over and above those entities which are postulated by physics (or, of course, those entities which will be postulated by future and more adequate physical theories).[10]

'Nothing in the world over and above what is postulated by physics' commits the materialist to an account of man that is compatible with the ontological stringencies this imposes, and thus it is that D.M. Armstrong, who shares Smart's physicalistic conception of materialism, contends that:

> For a materialist, a man is a physical object, distinguished from other physical objects only by the special complexity of his physical organisation. He does not have any non-physical properties.[11]

Why, however, should materialism be expressly formulated by reference to physics? The main reason why Smart and Armstrong take this course is, it seems, that they wish to defend a scientific materialism, one that finds its justication in the success of science as an account of the world.[12] Physics, moreover, is the science of matter and its motions,

so a scientific materialism has a clear affinity for that science, and one which is reinforced by the fact that physics seeks to investigate the fundamental constituents of matter, what ultimately there is in the material world. It is, however, one thing to recognise physics as having a fundamental role in the scientific account of the world and another to say that physics suffices as an account of the world, which is implied by the assertion that there is nothing in the world other than the entities postulated by physics. What about the entities which other sciences postulate? It is at this point that Cornman's remark about definitions of materialism that saddle the theory with the reduction of everything to entities explainable by one basic science finds its application, for Smart and Armstrong's view of scientific materialism takes as its justification the hypothesis that all other sciences may be reduced to physics, which then becomes the only science that is ultimately required in accounting for the world. Thus, Armstrong, taking his cue from Smart, presents his defence of materialism on the basis of the conviction that:

> It seems increasing likely that all chemical and biological happenings are explicable as applications of the laws of physics that govern non-chemical and non-biological phenomena,[13]

and with biology so reduced, the expectation is that sciences next in line, such as psychology, which deals with human conscious phenomena, may follow. The task then is to remove philosophical objections to that stage in the achievement of the unity of science.

Whether Smart and Armstrong's way of defining materialism is acceptable depends, therefore, upon whether the hypothesis that other sciences may all be reduced to physics, otherwise known as the

hypothesis of the unity of science, is a sustainable one. It is at the present time widely believed, even by at least one philosopher, Hilary Putnam, who first brought the hypothesis to philosophical attention, that this is a false hypothesis,[14] but prior to any attempt to develop an alternative definition of materialism, it is necessary to consider why precisely one based on the unity of science hypothesis must be rejected.

4. The unity of science hypothesis.

To say that physics suffices as an account of the world is ambiguous insofar as there are at least two senses in which such an account may be given, respectively what may be called the 'inventory' sense and the 'explanatory' sense. In the inventory sense, physics would be held capable of providing a complete listing of the sorts of phenomena to be found in the world, and its constituents - a sense to which, by the previous quotations, Smart and Armstrong are clearly committed. In the explanatory sense, physics is similarly held to offer a complete explanation, all the explanation that is required, of all that occurs in the world, and in espousing the hypothesis of the unity of science they are embracing this sense of 'sufficient account' also. Indeed, when in the previous Section we introduced this hypothesis, it was as the means by which Smart and Armstrong justify the claim that we need only recognise the entities that physics postulates, the claim that physics is a sufficient account in the inventory sense. But the reduction of sciences, as the quotation from Armstrong indicated, consists in their explanation in terms of the laws of another science.[15] The question therefore arises as to how the purported explanatory sufficiency of physics yields inventory sufficiency.

The answer lies in the precise form of explanation by which it is proposed the unity of science may be achieved. In their article entitled 'The unity of science as a working hypothesis', which arguably influenced both Smart and Armstrong, P. Oppenheim and Putnam indicate that it is by micro-reduction of the theories or laws of other sciences,[16] ultimately to the laws of physics, that all other sciences are rendered potentially eliminable in favour of physics. A micro-reduction occurs when the behaviour described by a particular set of laws constituting a 'reduced' theory, $T_2$, is explained by a set of laws provided by a 'reducing' theory, $T_1$, which relate to the behaviour of the spatial constituents of the entities whose behaviour is described by $T_2$.

A prime example of such micro-reduction is the explanation of the laws of chemical combination, expressed in the various chemical equations, which state what substances will result, and in what proportions, from the combination of given chemicals in particular proportions. These laws are explained as resulting from the sub-atomic structure of the chemicals involved. Thus, the combination of hydrogen and oxygen to form water is explained in terms of the number of electrons in the outermost 'electron shells' of their respective constituent atoms. The combination of hydrogen and oxygen is, in effect, re-described in this explanation as the combination of different structures of sub-atomic particles. But, if a phenomenon is re-described in this way, it would appear that the original description, relating, in this case, to the combination of hydrogen and oxygen, is potentially dispensable in favour of that of the micro-reducing theory.[17] If the micro-reductive mode of explanation may be generalised such that all occurrences may be explained through re-description ultimately in terms of the

behaviour of structures of sub-atomic particles as described by physics, then it would further seem that the descriptions of physics are the only ones needed, at least in principle. The required descriptions may be very complicated and de facto perhaps impossible to provide for that reason, but the point would still be established that in principle physics suffices both as an inventory and an explanation of the world, and it is to this that advocates of materialism like Smart and Armstrong are committed.

It should be noted that, unlike in the case of the reduction of chemical laws to physical ones, it is not envisaged that laws and theories constituting other sciences would be directly reduced to physics. The pattern of micro-reduction which science evinces is of micro-reduction between sciences dealing with adjacent 'levels of existence', of which Oppenheim and Putnam suggest there are the following,[18] which they list in descending number order so that the least complex and most basic entities have the lowest reference number: (6) social groups; (5) multicellular living things; (4) cells; (3) molecules; (2) atoms; (1) elementary particles. The ordering is such that entities of each given level, apart from the last, have as their immediate constituents those entities at the next level down, and similarly, reduction of theories dealing with entities of a particular level will, in the first instance, be by theories dealing with those at the next lower. For example, biological theories dealing with individual cells will be micro-reduced by chemical theories concerned with the behaviour of molecules; but by virtue of the reduction of chemical theory ultimately to the behaviour of structures of sub-atomic particles, biological theories are still deemed reducible to physics. A transitive relation between micro-reductions is thus envisaged such that if a theory $T_3$ is micro-reduced by a theory $T_2$

applying to the next level down, and $T_2$ is in turn correspondingly reduced by a theory $T_1$, then $T_3$ reduces to $T_1$.

Prior to criticising the attempt to define materialism as the theory that physics gives a sufficient account of the world in both the inventory and explanatory senses, which is what Smart and Armstrong's view amounts to, it is appropriate to summarise the nature of the dependence of this on the unity of science hypothesis. The position is as follows:

(1) The justification for the belief that physics gives a sufficient account of the world in both the inventory and explanatory senses depends upon the hypothesis that all sciences are reducible to physics by the micro-reduction of the theories that constitute them - the unity of science hypothesis.

(2) A micro-reduction consists in explaining a phenomenon in terms of the behaviour of the spatial constituents of the phenomenon concerned, and this sort of explanation amounts to a re-description of it.

(3) If a phenomenon is thus re-described, the original description may in principle be dispensed with, and since micro-reduction is transitive, a phenomenon at any given level of existence may be re-described, ultimately, in terms of the descriptions of physics relating to structures of fundamental particles. This has the result that all other descriptions of the world may in principle be dispensed with in favour of the latter, which are thereby shown to be a sufficient account of the world in both senses.

5. The unity of science hypothesis rejected

There are two main reasons why the unity of science hypothesis must be rejected, both of which have been identified by Putnam in his later writings.[19] The first is that there are regularities of nature to be found at one level of existence for which there are no corresponding regularities at lower levels of existence, so that descriptions relating to such regularities may not be dispensed with in favour of lower level ones. Second, it may be argued that even if there were to be coextensive descriptions at lower levels for one describing a regularity at some higher level, it would not necessarily follow that the latter was dispensable, for the truths asserted may differ.

The first of these objections may be illustrated by reference to a higher level case of micro-reduction. In economics the tendency for a fall in the price of a product to cause more of it to be purchased, a lawlike relationship, is explained by the effect of the falling price on the purchasing decisions of individuals. This may be represented as a level (6) phenomenon, the greater demand for a good within a social group, being explained in terms of the behaviour of multi-celled living things, level (5) in Putnam and Oppenheim's hierarchy. But any further micro-reduction appears to be thwarted for want of the requisite regularity. The requirement would be for an explanation of the individual purchasing decisions at the level of individual cells or assemblies of individual cells, presumably brain cells, in view of their obvious role in determining human behaviour. However, there is, it seems, no particular pattern of brain cell activity which corresponds to individuals' decisions to buy more of a product in the way that there are, say, combinations of certain types of atom, as determined by their sub-atomic structures, in the formation of water out of hydrogen and oxygen.

The structure of the brain changes over time, for example to compensate for cell losses, and also as a result of previous activity, so there is no question of all the individuals who take the decision to buy more of a good undergoing exactly the same pattern of brain cell activity. If the regularity is lost at the level of individual cells, there will certainly be no corresponding regularity at the level of their spatial constituents. A further illustration is provided by the case of pain. This is a naturally occuring phenomenon to which various sorts of multi-celled organisms are prone, but at the level of individual cells or assemblies of such items there is no common pattern of activity corresponding to that phenomenon. The firing of C-fibres, which is the neurophysiological correlate of pain in humans that is familiar in the literature on materialism, does not occur in octopuses, but, Putnam notes,[20] they nevertheless are known to feel pain.

Now, in each of these cases, micro-structural constituents may indeed explain the phenomenon in question. The firing of individual cells may explain the occurrence of the decision to buy more of a good, in the sense that if there was not some such firing, there would never have been any event describable as the decision to buy more; and likewise the firing of cells may account for the experience of pain. But, as we have seen, there is no regularity of cell firing corresponding to either of these higher level regularities, the purchasing decision and pain, so to suppose reference to the latter is potentially dispensable in favour of reference to cell firing would require the denial that the higher level regularities are genuine regularities. Otherwise the reference would not be potentially dispensable, being required to express truths not comprehended by lower level description. But the claim of the unity of science hypothesis is not that the regularities

discerned at higher levels are false, which would be an extreme and implausible position to take, but that they may be re-described by reference to lower level phenomena - ultimately, those recognised by fundamental particle physics. The unity of science hypothesis thus appears a false one.

The problem of regularities found at higher levels that have no counterpart lower down is, moreover, not confined to the explanation of occurences, for it also applies to the description of structures in the world. There are no regularities of structure at the level of assemblies of individual molecules that correspond exactly to the regularity of structure discerned by the notion of a cell in biology. No two cells have just the same molecular constituents, so from the point of view of molecular assemblies there is no such thing as a cell. Once again, therefore, physics may only be portrayed as a sufficient inventory of what there is in the world by repudiating entities, not re-describing them.

Let us turn now to the second objection, which was that even if descriptions relating to different levels of existence were coextensive and such that the lower level phenomena explained the higher of the two, it would not necessarily follow that the higher level description was dispensable, for the truths asserted may differ. The test of this is whether one description could have been true and the other false. Thus, it may be argued, using the case of deciding to buy more of a good again as illustration, that even if there had been a particular pattern of brain cell activity that was in fact invariably correlated with the decision to buy more of a good - one displayed by all individuals of which the latter was true, it could have been otherwise. The mere

fact that it is false that there is a single such pattern for all humans who decide to buy more of a good shows this; a point which Putnam[21] has reinforced by suggesting imaginary examples to the effect that communities of intelligent robots, artifacts, totally lacking in brain cells, could, given the appropriate 'social institutions', engage in economic activity. If the truths asserted by two descriptions are thus shown to differ even if they happen to be coextensive in their application, it follows that one is not dispensable in favour of the other, because to dispense with one of them would mean that we would no longer be able to express a truth that we were previously capable of expressing.

Now this argument, to the effect that descriptions provided by sciences like economics could not be dispensed with in favour of ones relating to micro-structural occurrences even if they were coextensive, because the truths asserted are different, invites the question of the precise nature of this difference. It is one moreover to which Putnam has given considerable attention in his subsequent writings, and his proposal[22] is that the difference is to be explained in terms of a distinction between 'functional role' descriptions and 'structural' descriptions. A favourite illustration of the contrast here is the different ways by which the operation of a computer may be described, in particular, the abstract functional descriptions provided by a computer program, and the actual mechanisms by which a particular computer is able to execute its program. (Putnam generally refers to 'Turing machines'[23] when considering the former, but it does not appear necessary to expound this notion in order to convey, for present purposes, the nature of the distinction being drawn).

A computer program is a sequence of instructions to which the operation of a computer conforms when they are programmed into it, instructions that refer to such operations as storing data, performing mathematical operations on it, and displaying the result. In short, it refers to a set of functions. It does not, however, imply any specific mechanism by which those functions are to be executed. The computer could be composed of an arrangement of transistors, vacuum tubes, or whatever else - all that matters from the point of view of executing a program is that it somehow has the means of performing the required functions. The relation between a science like economics and neurophysiology may be viewed as similar to that between computer programs and computer hardware. Within economics, the decision to buy more of a good whose price has fallen is an event resulting from the combination of information received about the change in price, ability to pay and the existence in the individual economic agent, whatever his internal structure, of a rational preference function according to which the agent seeks to maximise the utility derived from their limited resources. None of this presupposes that the agent be constituted in any particular way so far as the mechanisms that make economic behaviour possible, any more than the ability to execute a particular program implies that a computer has a particular mechanism, the descriptions being equally concerned with functional roles rather than their structural realisation.

Just the same relation that exists between economics and neurophysiology, which is, of course, concerned with identifying specific structural mechanisms, has been suggested to apply between the latter and psychology, where there was comparatively recently a

debate over the ability of the subject to survive assimilation to neurophysiology.[24] Much contemporary psychology is directed to explaining human cognitive performance by postulating functionally defined components in the brain that would account for the observed performance of individuals in particular tasks. And this approach ensures the inability to dispense with its descriptions in favour of neurophysiology, for reasons already apparent. It is, moreover, not only in sciences addressing higher levels of existence, such as those of social groups and multi-celled living things, that functional concepts are encountered. A classic example of such a concept is found in biology at the level of individual cells, in the notion of a gene, which applies to whatever it is in cells that perform the functional role of transmitting hereditary characteristics. It has turned out that the structural items that perform this role are DNA molecules.

Enough has now been said to indicate why the unity of science hypothesis and the prominent rendering of materialism that is based upon it are unsustainable. There are, first, regularities that may be discerned in the world that are not comprehended at lower levels of existence, and the adequacy of physics as an account of the world, in both senses depended on their being so comprehended. And there are truths describable by sciences other than micro-structural physics that are in principle inaccessible where the concern is specifically with structure, in particular functional role descriptions. But, given that we must reject definitions of materialism that imply that physics offers a sufficient account of the world, what is to replace them? We shall address this question by first drawing a contrast between the official definitions to which Smart and Armstrong are committed,

and the more modest renderings that are implied by their actual defences of materialism.

6. Towards an alternative definition: Smart and Armstrong reconsidered

We have seen how in defining materialism or the materialist view of man, Smart and Armstrong commit themselves to the unity of science hypothesis. It then makes an ironic contrast that in his account of how descriptions relating to mental phenomena should be understood so as to render them compatible with a materialist view of the world, Armstrong should appeal to the analogy offered by the concept of a gene in biology, a concept which we have concluded is a functional one and not in principle dispensable in favour of one relating to physical structure. Typically, according to Armstrong, descriptions concerning 'mental phenomena' may be understood as referring merely to 'a state of the person apt for bringing about a certain sort of behaviour'.[25] In common with the gene and other functional role concepts, this specification is quite non-committal as to the intrinsic nature of what is being referred to. The state apt for producing a certain sort of behaviour might turn out to be a neurophysiological phenomenon or a condition of an immaterial mind. But, of course, while the application of such descriptions does not imply the inadequacy of a physical account of the intrinsic nature of what they are referring to, they are not themselves descriptions belonging to physics. Physics makes no mention of the property of being or state of the person apt for bringing about certain behaviour. Similarly, Smart in seeking to avoid the problem for the defence of materialism posed by the experience of apparently non-physical items like afterimages, proposes a 'topic-neutral' account of the descriptions involved. To say a person is having a yellowish-orange

afterimage, for example, means, roughly, that there is something going on in him which is like what takes place when he sees an orange,[26] which is again a description unknown to physics. It nevertheless leaves the way clear for the occurrence of having an afterimage to be in its intrinsic nature simply the occurrence of a certain brain phenomenon.

Relating these observations to the earlier contrast between functional role and structural descriptions of the world, it now appears that what in effect Smart and Armstrong are advocating is materialism as a theory about the structure of the world, rather than as comprehending all that may be said of it. For, what they are doing is attempting to clear the way for physical descriptions as a sufficient account of the intrinsic natures of items in the world that are picked out by other sorts of descriptions, such as ones concerning mental phenomena, by rendering the latter in functional or otherwise 'topic-neutral' terms - neutral, that is, in regard to the intrinsic nature of what is denoted. This is a far more promising construal of materialism than their official one, with its untenable commitment to the unity of science hypothesis, and in what follows the attempt will be made to arrive at a workable specification of materialism as a theory about the structure of the world.

## 7. A definition of materialism

Earlier it was observed that materialism has traditionally involved the claim that everything is just matter and its motions,

and scientific materialism has naturally focussed on physics, the science of matter. It may be argued, then, that if a theory of the world is to be identifiably materialist, it ought to preserve in some sense the idea that everything is matter and its motions. A clear way of retaining this idea is, moreover, offered through the proposal that materialism be regarded as a theory about the structure of the world to the effect that, from a structural point of view, everything is just matter and its motions. The only structures then that enable particular functional role, or other descriptions that are neutral regarding the precise intrinsic natures of the constituents of the world, to apply to the world are material ones; it is only by the motions of such structures that functional roles are carried out. However else they may be described, all occurrences in the world are on this understanding motions of matter.

In a clear sense then it is possible, it appears, to propose that everything is just matter and its motions, although this is not to imply that all descriptions are dispensable in favour of descriptions of matter and its motions. But, reflecting the fact that the main impetus for a materialist view of the world comes from science, as shall be argued in the next Chapter, and the fact that it allows a clear determination of what entities are and what are not compatible with a materialist view in a way that does not seem liable to accusations of being ad hoc, it is also desirable still to appeal to science in defining materialism; to, in other words, define a scientific materialism. Scientific materialism may not, however, be defined purely on the basis of physics, for we have already noted that there are structural

regularities in the world that are not discerned at the level of existence where the descriptions of physics alone apply - that of fundamental particles. The example we took of a structural regularity that physics does not discern was that of the cell in biology - although cells are ultimately composed of fundamental particles, there is no one structure of fundamental particles that all cells share. More sciences besides physics must therefore be involved, and it appears reasonable to do so. Other sciences besides physics address the structure of matter; a cell is as much a structure of matter as the atom, the difference being simply the greater structural complexity in the former case.

The question, however, is what sciences to involve in the definition of materialism in addition to physics. The obvious answer is all those that address themselves to the structures to be found in the world, given the adopted view of materialism as a theory about the structure of the world. But this is not satisfactory as it stands, for there are structures ascribed to the world by a certain group of sciences, the social sciences, which it is inappropriate to include among the concerns of materialism. For example, sociology concerns itself with class structures, and politics with structures of government, but these are not structures of matter. Persons do not compose social classes in the sense that, say, fundamental particles compose atoms, and molecules compose cells. A class structure is not a spatial assembly as are the latter structures. Rather, it is specified in essentially functional terms, by reference to such things as the roles and rules that are observed by different individuals within society, or control over resources. The same class or governmental structures could in

principle be displayed by groups of individuals quite differently structured in terms of material composition. Indeed, the individuals concerned might have inherently immaterial constituents such as Cartesian minds. Such functionally conceived structures as typify the social sciences concern with structure in the world do not, accordingly, fall within the domain of materialism as a theory about the structure of the world, for the latter is concerned explicitly with structures of matter. Structures of matter are, moreover, as exemplified by the above cases of atoms, molecules and cells, spatial structures. Materialism, then, is concerned specifically with the spatial structure of the world, and the sciences that are to be included within the definition of materialism are ones that collectively concern themselves with the spatial structure of the world.

The distinction we have drawn between sciences that are concerned with the spatial structure of the world and those that ascribe functionally defined or other abstract structures to it, corresponds to the commonly drawn distinction between the physical sciences and the social sciences, and on this basis scientific materialism may appeal to the physical sciences in its formulation. But how, in the light of these considerations, is scientific materialism to be formulated? To begin with, it appears we can no longer accept without qualification the idea that the only structures in the world are material ones, for that would exclude the social sciences' structures when there is no real conflict between materialism and the structures of social science, because of their essentially functional character - they impose no restriction over the intrinsic nature of the objects to be found in the world. The structures of

social science are abstractions analysable in terms of the behaviour, roles and rules, displayed by certain such objects. We could say, then, that the concern of materialism is with the intrinsic structure of the world, the structure of the world that exists in its own right rather than in a derivative, or abstract sense, and offer the following as a first attempt at a definition:

D1: Materialism is the theory according to which the intrinsic structure of the world consists of spatial entities, and the physical sciences suffice as an account of that essentially spatial structure.

D1 immediately gives rise to a number of questions. First, it may be asked precisely which the physical sciences are - to say they are ones that address the spatial structure of the world, while supplying a principle for identifying them, and excluding, it would seem, the social sciences, leaves the task of actually identifying them, and hence the precise ontological commitments of materialism thus defined, still to be performed. Then, it is also reasonable to enquire how the expression 'suffice as an account' is to be understood given its previously encountered ambiguity.

On the first of these questions, it is plain that sciences addressing entities falling between Oppenheim and Putnam's levels (1) to (5) count as physical sciences, for these levels embrace in increasing order of complexity the full range of spatial structures to be found in the world, the simplest being fundamental particles and the most complex, multi-celled living things. So embraced is a corresponding hierarchy of sciences ranging from fundamental particle

physics to the various biological sciences. They do not have to be exclusively concerned with providing accounts of the composition of spatial structures to qualify as physical sciences; all that is needed is that this be part of their concern.

Turning now to the second question, that of how the claim that the physical sciences suffice as an account of the spatial structure of the world is to be understood, it needs first to be recalled that the two senses in which an account may be given of something that bear on discussion of materialism are the inventory sense and the explanatory sense. In the first of these, to say the physical sciences suffice as an account of the spatial structure of the world is to say the descriptions of the physical sciences include everything that is actually found in the composition of that structure. There is nothing they leave out. In the second sense, the claim is that they give a sufficient explanation of those constituents, how they got to be as they are and how they behave. Both senses of 'sufficient account' are, moreover, involved in the traditional claim of materialism that everything is just matter and its motions. The idea that everything is just matter suggests the inventory sense, and the idea that everything that occurs is just motions of matter implies that everything that occurs may be explained as motions of matter, and hence the explanatory sense of 'sufficient account'. Since we have been concerned to do justice to this traditional claim, the specification of materialism that we are seeking should accordingly incorporate both senses of 'sufficient account'.

In embracing both senses, however, particular care must be taken with the explanatory sense, for we have concluded that explanations of phenomena in the world that are non-committal as to the intrinsic nature of the entities to which they relate, such as are offered by the social sciences, may validly be provided. Yet, to claim that the physical sciences provide a sufficient explanation of the behaviour of objects in the world would seem to suggest that these other explanations are redundant, and hence not valid additions to ones offered by the physical sciences. This difficulty may be avoided in the following way. What may be proposed is that the sufficiency claim of physical science explanations be treated not as an absolute one, but as one relative to a certain specification of events in the world, a specification that is, however, the fundamental one, the world being as it is, and which thereby still gives clear sense to the idea that everything is just matter and its motions. Thus it may be argued that however else they may be described, all occurrences in the world are rearrangements of spatial structures. This specification is, further, fundamental in that it is the specification in virtue of which all other specifications that validly apply to events in the world, such as the functional role ones of the social sciences, do apply. The world being what it is, without there being occurrences that are describable as rearrangements of spatial structures, there would be no events to describe in these or any other terms. And the explanatory sufficiency claim that materialism may thus make is that the physical sciences provide a sufficient explanation of all that occurs in the world, considered as rearrangements of spatial particulars, in that they are able to state conditions, at least

in principle, which suffice for the occurrence of all spatial rearrangements that take place.

Important progress has now been made towards a definition of materialism that is less ambiguous than D1, but before this can be presented, further clarification is needed regarding the sufficiency of the physical sciences. At present, the physical sciences are incomplete, evolving, fields of study. There remains much that takes place within their domain that is not yet adequately understood, and there is no guarantee that our present understanding of phenomena as provided by the physical sciences will not undergo revision. It thus seems that neither in the inventory nor explanatory sense can present-day physical science be claimed to be a sufficient account of the spatial structure of the world. Smart in fact acknowledges a corresponding problem for his physics-based definition when, as we saw earlier, he speaks of materialism as the theory that there is nothing in the world over and above those entities that are postulated by present-day physics, or those entities that will be postulated by a future and more adequate physics. What he is saying is that at some stage in the development of physics it will offer a sufficient account of the world, even if that stage has not yet been reached. Physics is, for him, potentially sufficient, and materialism allies itself to this belief. Could we not then follow Smart's example and say analogously that the physical sciences are potentially sufficient?

The problem is, however, that we cannot, it seems, say what entities will and will not be included in the physical sciences when the potential sufficiency becomes realised. Perhaps entities

that present-day physical sciences do not mention, and which are at the centre of philosophical interest in whether materialism may be defended, will later be embraced by them. If a definition committed to this possibility is endorsed, the sensible course is not to argue matters out now but, it would seem, to wait and see. However, it may also be asked whether it is reasonable to postulate a stage in the development of sciences when they are completed. Certainly this will be the case if there are a definite number of determinate truths about the world waiting to be discovered, for then completion of a science will be simply a matter of discovering all the truths that relate to its particular domain. But whether this commonsense view is sustainable is a matter of some controversy.[27] There is in any event always the problem of how we may know that all the truths have been discovered, so the recent advice to wait and see over the entities that present-day physical science does not recognise could defer any debate over materialism indefinitely.

To get scientific materialism off the ground as a theory embodying specific ontological commitments that may be the basis of current debate, it must, it seems, refer to the inventory of entities offered by present-day physical sciences, and similarly for any debate over specific explanatory claims. However, instead of ascribing to materialism the bald claim that, as presently constituted, the physical sciences are inventory and explanatory-sufficient accounts of the world, which is, for reasons indicated above, just as untenable as referring to some future state of physical science, something more modest must be proposed. A suitable

alternative is the hypothesis that the physical sciences account is sufficient, except where it is recognised within the disciplines concerned that sufficiency has not been achieved. Thus, for example, while the behaviour of DNA molecules is recognised within science to be incompletely understood, it is not a matter of controversy that genes, the transmitters of hereditary characteristics, are DNA molecules. Similarly, while in the field of fundamental particle physics the question remains open as to what the ultimate constituents of matter are, it is nevertheless accepted that at one level in the decomposition of matter there are protons, neutrons and electrons. The proposal to refer to the hypothetical sufficiency of present physical science, except where the disciplines concerned recognise insufficiency within them, might be criticised as being an ad hoc manouvre that sits badly with our earlier criticism of Cornman. In its defence, however, it can be said to reflect a conviction that is central to scientific materialism: namely, that there is no means of arriving at beliefs concerning the spatial structure of the world and its transformations that is preferable to that provided by the appropriate sciences, and where there is conflict with other perspectives on the world it is those, and not the scientific ones, that should for that reason be withdrawn as false. Also, it is by no means obvious that many of the beliefs embodied in the physical sciences at present will in the future be overthrown. (Much depends here upon how the history of science comes to be written, as Rorty[28] has observed).

We are now in a position to offer the replacement for D1. It is of necessity longer than the latter, and embodies the prior points made in criticism of D1 in two clauses corresponding to the two senses of the sufficiency claim. The definition, which may be

referred to as 'DM' is as follows:

DM: (1) Materialism is the theory according to which the intrinsic structure of the world consists of spatial entities, and the physical sciences as at present constituted suffice as an account of that structure in the sense of providing a complete inventory of the sorts of spatial entity found within it, except where those disciplines themselves recognise insufficiency in the account they offer.

(2) The theory holds also that the physical sciences suffice as an account of the intrinsic structure of the world in the explanatory sense, insofar as, however else it may be described, the behaviour of its constituents may be described as rearrangements of spatial structures and the physical sciences as at present constituted, enable, in principle, the statement of conditions that suffice for the occurrence of any such rearrangements; except, again, where those disciplines themselves recognise insufficiency. The spatial rearrangements so explained are ones but for which other behavioural descriptions would not apply to the world.

## 8. A preliminary appraisal

The main object of this opening Chapter has now been achieved with the presentation of DM, which is now intended to serve putatively as a defensible representation of scientific materialism. In its favour, the following, at least, may be claimed:

(1) It accords with the traditional and characteristic claim of materialism that everything is matter and its motions, for at

the level of the essentially spatial structure of the world, this is what the two clauses of DM effectively claim.

(2) It avoids the difficulties that beset the attempt to define materialism by way of the unity of science hypothesis, as in the official definitions of Smart and Armstrong. DM allows that other sciences may discern regularities in the structure of the world that are not discerned by physics, and also other ways of describing and explaining the behaviour of things in the world than those provided by the physical sciences. It does so where those descriptions and explanations are neutral in regard to the intrinsic structure of the items concerned, so rendering materialism compatible with the social sciences. DM does, however, enable physics to be the basic science, by virtue of its addressing the ultimate constituents of matter, and the fact that it may still be claimed that all spatial rearrangements ultimately take place as they do by virtue of causal regularities discerned by physics. But for the structural and causal regularities discerned by physics, in other words, the structural and behavioural descriptions provided by other sciences would not apply to the world as they do.

(3) DM accords with the view of materialism that emerges from the actual defences of the theory that Smart and Armstrong present, in contrast to their official definitions. It does so through admitting the compatibility of functional role descriptions, and others neutral in regard to intrinsic structure, with materialism, such as are appealed to in their treatments of mental phenomena.[29] This compatibility extends, it may be noted, to more sophisticated functional role treatments of mental phenomena such as Putnam's.

A difference which needs to be recognised is that whereas Armstrong tends to treat particular mental states as specifiable in isolation from others by reference to their causal role, Putnam emphasises the interconnectedness of such states. A particular mental state must, according to him, be specified not merely by reference to the behaviour it characteristically occasions or the stimulus inputs by which it is occasioned, but by reference to its connections with other such states.[30] This contrast will be returned to in the next Chapter, where consideration will be given to the extent to which recent controversies about mental phenomena, and ones like beliefs and intentions in particular, remain neutral in relation to materialism as defined here. Such neutrality is a further advantage of DM since it avoids the need to engage in too many controversies at once in defending materialism.

(4) DM enables the traditional contrast to be drawn between materialism and Cartesian dualism. The latter holds that the intrinsic structure of the world involves two fundamental categories of substance, spatial entities, as with materialism, but also minds, entities that exist in time only. DM excludes the latter entities by claiming that the intrinsic structure of the world is spatial, a claim that is intended to exclude non-spatial constituents of that structure.

(5) In claiming that the physical sciences offer a complete inventory of the sorts of spatial entity comprising the intrinsic structure of the world, DM also distinguishes materialism from other theories with which it is usually contrasted, notably 'double-aspect'

theories, according to which there are intrinsically non-physical quantities which appear as aspects of physical phenomena.[31]

(6) DM enables interesting and important problems to be raised resulting from the apparent existence of qualities within the content of perceptual experience that are not recognised in the accounts of the phenomena concerned that are accepted as sufficient within the physical sciences as at present constituted, a point that will be developed in the next Chapter.

Against these advantages, however, there are criticisms that may be posed at this juncture. First, there is a terminological criticism to the effect that the theory thus defined ought to be called 'physicalism' rather than materialism, by virtue of its appeal to the physical sciences. In this regard, it must be acknowledged that 'physicalism' is a term that some philosophers have employed in discussing scientific materialism, and Smart and Armstrong appear to regard 'physicalism' and 'materialism' as interchangable.[32] The latter indeed is hardly surprising when, officially at least, they interpret materialism as the theory that physics gives a sufficient account of the world, and in the context of that representation of materialism, 'physicalism' does seem a more accurate term to use. The present definition, by contrast, does not appeal only to physics but to the set of sciences that concern themselves with the structure of matter, although the convention has been followed in referring to them as physical sciences. The use of the term 'materialism' in connection with DM in preference to 'physicalism' may be justified on this basis, and also on the

grounds that it is the more frequently encountered one in the literature with which we shall be concerned here.

A more substantial objection to DM that is appropriate to consider at the present juncture concerns the idea that the physical sciences treat the intrinsic structure of the world as consisting in spatial entities. The problem for this is that we have recognised the role of physics as revealing the ultimate nature of matter and it has begun to appear, at least to some, that the most consistent view is that space and time are not the fundamental stuff of the universe but mere average statistical effects of more fundamental entities lying deeper down.[33] If this is what modern fundamental particle physics suggests, then the physical science account of the intrinsic structure of the world, according to which that structure is built on the fundamental entities of physics, does not ultimately admit that the intrinsic structure consists of spatial entities, and DM becomes inconsistent. However, there are at least two defences against this objection. The first is to appeal to the qualification that appeal is to be made to the account of the physical sciences only where it is recognised within the disciplines concerned that a sufficient account of the subject matter in question has been reached, and this is not true of the ultimate nature of the matter. It is far from an established fact that this is not spatio-temporal in character. The second defence is to say that even if the intrinsic structure of the world is not ultimately spatial, this does not entail that at levels relevant to the appraisal of materialism, such as that of brain cells, it is not the case that the entities concerned are spatial. Problems would only arise if it were held that the account of the structure of the world offered by physics were itself sufficient, but this claim was abandoned with the unity of science definition of materialism.

It seems, then, that DM survives this preliminary appraisal and attention may proceed to objections to it that shall be the crux of the present discussion, ones that have been central in recent discussion of materialism, to the effect that certain items present in perceptual experience are incompatible with the materialist view of the world, of which we have claimed DM provides the most defensible representation. As we said previously, such objections will be presented in the next Chapter, where also argument will be provided as to why the conflict should be resolved in favour of materialism. One reason has already been encountered, the conviction that there is no means of arriving at beliefs about the intrinsic structure of the world that is preferable to that offered by the physical sciences. This will be reinforced in the next Chapter by arguments to the effect that resolving the conflict in favour of materialism yields a simpler and explanatorily more coherent and comprehensible view of the world.

# CHAPTER 2

## The Challenge of materialism

### 1. Summary of Chapter

The object now is to demonstrate why materialism as defined by DM constitutes a theory that merits serious attention, and to identify the problems involved in its defence. The latter are argued to centre upon a conflict between the physical sciences' account of the world, and the constituents that perceptual experience seems to indicate are present there, and the theory's claim to attention is that a more coherent, comprehensible and simple account is obtained if we may accept the physical science view. Two sorts of content of perceptual experience are proposed as being the basis of the conflict: qualia and sensations. Qualia are introduced as simple, homogeneous, intrinsically indefinable qualities which characterise our experience of Secondary Qualities and to which the physical sciences make no reference. Sensations are characterised as objects of perceptual experience, such as pains and afterimages, that are distinguished by being experienced in their particular manifestations by only one individual, and as such count also as mental phenomena. They present two problems for materialism: first, the theory cannot accommodate the qualia they display; nor, second, can it accommodate their locations as manifest in experience.

Having introduced the notion of mental phenomena, the question arises as to why sensations alone should be focussed upon as posing difficulty for materialism to the neglect of other such phenomena

like thoughts, beliefs, and intentions. In the past, materialists justified this concentration on the grounds that these cognitive and volitional mental phenomena could be analysed in terms of overt physical behaviour. This view has, however, to be rejected in favour of an 'inner process' one, but it is argued, in accordance with the prevailing opinion, that reference to such phenomena remains neutral concerning the intrinsic nature of the processes concerned, and is hence not inherently incompatible with DM. One problem that is, however, identified is that beliefs and the like find conscious expression through imagery and this involves intrinsically non-physical items. This difficulty is found to be subsumable under the problems of qualia and sensations, though. Further problems might appear to be caused by the 'intentionality' of cognitive and volitional mental phenomena, and the phenomenon of consciousness itself might also appear to present problems. Consideration indicates, however, that in neither case is any difficulty raised that may not be addressed through the treatment of qualia and sensations. With this, the Chapter concludes with an outline of how consideration of these latter will proceed.

2. The problem of qualia

In the previous Chapter it was decided to understand by materialism the theory specified by the definition DM, and in future references to materialism and its defence this shall be the intended construal, except where the context makes apparent that a wider interpretation is being adopted. Now, as previously indicated, DM commits us, as with other representations of scientific materialism, to an inventory of the world in which certain qualities, that our perceptual experience indicates to be present there, are not recognised. It presents us with the conflict between, as Sellars puts it, the 'scientific image' of the world and the 'manifest image'.[1]

The concern in this Chapter is to present this conflict in detail and indicate why the attempt should be made to resolve it in favour of materialism. We begin with what may be referred to as 'the problem of qualia', the problem for the claim that the physical sciences provide a sufficient inventory of the spatial constituents of the world, posed by the fact that our experience of Secondary Qualities involves the experience of qualia, spatial constituents of which the physical sciences make no mention.

Usually included among the Secondary Qualities are colour, sound, taste and smell. They are contrasted with a further category of qualities, the Primary Qualities, qualities upon which physics has focussed in its account of the world by virtue of their obvious amenability, in contrast to the Secondary Qualities, to quantitative measurement and hence to mathematics.[2] Among these are included the spatial characteristics of shape, size and position, and also qualities such as motion, weight and hardness, and the conflict detailed above results from the fact that, within the physical sciences, an account of the Secondary Qualities is regarded as sufficient in which they are reduced to phenomena specified purely in Primary Quality terms. An explanation of this lies in the division of labour within the physical sciences which is such that, to begin with, colour and sound, the most important of the Secondary Qualities, fall squarely within the domain of physics, which, with its concern to give an account of the world in terms of the quantitatively measurable, accordingly yields accounts of the phenomena it addresses based on the Primary Qualities. Thus, according to physics, for a surface to be a certain colour is for it to be reflecting or emitting a certain wavelength composition of electromagnetic radiation, a

phenomenon which is specified purely by reference to features such as the spatial dimensions of the waveform, the energy content, and the rate of travel, each of which fall entirely within the Primary Quality domain. Similarly, sound is explained as the vibration of air molecules, a phenomenon again specified in purely Primary Quality terms. In the case of taste and smell, collaboration within the physical sciences has produced the view that what we are detecting when we experience a particular taste or smell is the shapes of molecules of substances in contact respectively with sense receptors in our mouth and nose.[3] The shapes molecules possess are of course again Primary Quality characteristics.

There is, however, no mention in these accounts of Secondary Qualities of what seem on the basis of our experience to be their essential characteristics, namely, the qualia, or phenomenal qualities, that they display. Indeed, insofar as these qualities are omitted from the account physics gives of the Secondary Qualities it could be said that, in effect, 'The world of physics is a colourless, soundless, and tasteless world'.[4] This comment of Smart's on his physics-based materialism could be said to apply just as much to DM, with its broader appeal to the physical sciences, for it is still committed to accepting the view physics offers of the Secondary Qualities, one which appears from the point of view of those sciences to be quite a sufficient one and hence not something that may be evaded by the escape clause in our definition.

What, therefore, is excluded when it is said that the physical science view makes no mention of qualia or phenomenal qualities? First, it may be recalled that such qualities were introduced in Section 2 of the last Chapter as the sense-apprehended qualities that distinguish, for example, different colours in our experience.

When we experience the colour red, say, we are aware of a simple, homogeneous quality present to the sense of sight which is characteristic of that particular colour, and is what enables us consciously to distinguish it from other colours. In fact it would be more accurate to say that for each shade of red that we are able to distinguish, there is a particular quale that is apprehended, so, strictly, we should speak of the 'quales of red', rather than a single quale. These qualities are further, in Smart's words, 'intrinsic and unanalysable'.[5] That is, they are qualities that individual colours possess in themselves and which render them inherently distinct from others, a point in accordance with our observation that qualia are things we apprehend as characteristic of particular colours; but, in addition, they are unanalysable, which is to say they do not admit of analysis or definition. No informative description can be given of a particular colour quale. Rather, it may be known only through experiencing it, or in Russell's terminology, 'by acquaintance'. (More will be said in the next Chapter of Russell's doctrine of knowledge by acquaintance, but for the present the term 'acquaintance' will simply be used as synonymous with 'experience'). It is this characteristic of being known only through experience, or acquaintance, that results in qualia being sometimes referred to as 'phenomenal qualities',[6] but in the interests of conciseness, and in view of the need to make particular reference to the writings of Smart and Armstrong, who favour the term 'qualia', this alternative locution will not be perpetuated here.

The nature of qualia as thus expounded, provides a clear reason why they should find no mention in the account of Secondary Qualities offered by physics and in turn accepted by the physical sciences. Physics, as previously indicated, seeks to apply mathematics to the world, and this requires that it focus upon properties that

are quantitatively measurable. Qualia, however, appear inherently unsusceptible to measurement. For, qualia are deemed to be intrinsic qualities that are indefinable, and hence knowable only through experiencing them. But, for measurement to come to bear on them they would have, contrary to this, to admit of quantitative specification and determination. It thus appears that by their very nature qualia are excluded from consideration by physics.

There is, then, a conflict between the account of the Secondary Qualities accepted as sufficient within the physical sciences, that offered by physics, and that which we are, it seems, obliged to adopt on the basis of our perceptual experience, one centring on the failure of the former to admit qualia. There are, however, compelling reasons to attempt to resolve the conflict in favour of DM, arising from the concern to obtain a coherent and comprehensible view of the world. This becomes apparent if we consider the evident incompatibility of the admission of qualia with 'the causal logic of sense perception' and facts that physical science has revealed about the causal processes involved in sense perception.

3. Qualia and the causal logic and facts of sense perception

One of the main points of agreement in the philosophy of perception is that we cannot be said to perceive an object or quality in our environment unless our senses are affected by it. A causal chain between object and percipient is, it is held, a conceptual or logical presupposition of sense perception - it is this which distinguishes sense perception from, say, 'intuitive knowledge' or 'extra-sensory perception'.[7] If, however, the account offered by the physical sciences of the causal process by which we experience constituents of the environment is considered, a problem is immediately presented for the retention of qualia. For, in the case of our experience of

colour, to take a particular instance, physical science has revealed that it is the propagation of electro-magnetic radiation, whether by reflection or emission, at an object's surface that gives rise to such experiences, not the presence of any colour quale, and this, as we said before, is not characterised by qualia. Applying the causal logic of sense perception to this case thus leads to the conclusion that if any quality of an object is experienced in colour experiences it is electro-magnetic radiation and not qualia.

It might be objected, though, that this argument only gets out what it puts in. It is not surprising that the physical sciences identify a physical property as what affects our senses, since qualia are, as we have seen, excluded from their consideration from the outset. The truth might be that before the emission or reflection of electro-magnetic radiation, there is a stage in the causal process in which qualia give rise to this propagation. Or there may be those who reject the entire physical science account of the causal process, holding that by some unknown means it is qualia that affect our eyes. Neither suggestion seems at all attractive. The latter leaves the mechanisms by which we experience the world an impenetrable mystery, while the first one, which holds that qualia may have a role to play in the causal process along with the propagation of electro-magnetic radiation, also involves considerable obscurity, if not to the same extent. For, no answer may be provided as to how precisely qualia give rise to electro-magnetic radiation - the physical sciences will not offer one, not merely for the reason already given, but also because they find no need for anything other than recognised physical events to explain its propagation; there is no explanatory gap that qualia are required to fill.

It is clear, then, that an account of the world which did not admit qualia would indeed be a more coherent and comprehensible, and for that matter simpler, than one which admits them, a conclusion which confirms the contention that there are good reasons to prefer a materialist account of the world as defined here. Support is in fact given both to clauses 1 and 2 of that definition, for not only does the present argument favour the first clause, which involved the claim that the physical sciences suffice as an inventory of the spatial structure of the world, but also the second, which said that the physical sciences provide sufficient explanation of the rearrangements of the spatial structures it contains. For, the propagation of electromagnetic radiation is a rearrangement of spatial structures, and we have just seen that there is no need to invoke qualia in explaining this, and the attempt to do so would create obscurity.

We turn next to consider the conflict with materialism arising from the recognition of sensations, and why this too should be resolved in favour of materialism if at all possible.

4. Materialism and sensations

In the first Chapter we said that discussions of materialism have tended to regard two sorts of entity as being incompatible with a materialist account of the world, respectively qualia and sensations. We have now dealt with qualia and why there are good reasons for excluding them from an account of the world, and attention now focusses upon sensations, where a similar story may be told, but with certain important additions.

It is appropriate to begin by considering again the kinds of item that philosophers have classed as sensations when discussing materialism. Typically, they have included bodily sensations such as pains and itches,

but also items experienced as a result of the malfunction of our perceptual apparatus, such as afterimages, or a ringing in the ears. There are a number of features that these assorted phenomena have in common to justify the shared classification. First, they are spatial in character, for, afterimages and bodily sensations are each experienced as having spatial extent and positions, while auditory phenomena likewise have experienced spatial locations. Then, also, they may each be represented as contents of perceptual experience, being objects of which we are aware through the operation of a particular sense modality, with bodily sensations experienced through intra-bodily perception. It is further known that particular manifestations of these phenomena, unlike other contents of perceptual experience, are confined to particular percipients. We cannot, for example, experience pains in anyone's body but our own, nor can anyone else see the afterimage that a particular individual is able to see. The fact that particular manifestations of sensations are thus confined to the consciousness of a particular individual leads to them being spoken of as 'mental phenomena', along with such things as thoughts and intentions, which share this characteristic.

Having introduced sensations and some of their common characteristics, something must now be said, first, about how they may be claimed to be outside the physical sciences' account of the spatial structure of the world, and then why, again, an account which excludes sensations—if construed as anything other than physical constituents of the world—is to be preferred. But a third question that needs to be addressed is why only sensations, to the neglect of other mental phenomena, have tended to be considered in discussions of materialism. These matters will be addressed in turn.

5. Sensations as non-physical objects

Now just as it was not the case that the physical sciences make no mention of the Secondary Qualities, it is not the case that they omit sensations, for they are studied by neurophysiology. However, just as the Secondary Qualities are rendered in Primary Quality terms to the exclusion of what appeared to be their essential characteristics as contents of experience, so the same may be said of sensations. This is because another common characteristic of sensations is that they involve qualia just as much as the Secondary Qualities do as contents of experience. The afterimage, for example, is experienced as a coloured shape, and hence directly shares the Secondary Qualities' involvement of qualia. Similarly, if we consider what distinguishes the intrinsic character of a pain from that of an itch, say, we seem obliged to recognise that this is a matter of different experienced qualities which admit of no significant verbal definition and are hence known through experience alone - we might refer respectively to the painfulness of the pain and the itchiness of the itch, but this is hardly to provide an informative description of the qualities concerned - so again, qualia are involved. If, however, the accounts of afterimages and pains provided by neurophysiology are considered, no mention is found of such qualities. The experience of an afterimage is explained in terms of aberrant patterns of firing of the receptor cells in the retina of the eye as a result of exposure to a bright light, and this activity is conceived in purely Primary Quality terms. Likewise, pain is explained as the firing of receptor cells in the skin, as a result of, say, damage or disturbance to it, which is brought to consciousness by a transmission system involving the firing of C-fibres, as is familiar from philosophical discussions of materialism.[8] Again, there is no mention of qualia in this process.

The physical sciences' account of the spatial structure of the world thus omits sensations as experienced, since it fails to take account of the qualia that characterise them. But, just as with the Secondary Qualities, the physical science account may be said to be preferable to one which does justice to how sensations seem to be as content of experience, on grounds of comprehensibility, coherence and simplicity. For, just the same arguments for accepting the physical sciences as sufficient explanation of our experience of sensations may be presented. It may be asked, for example, how the sensation of pain, as characterised by a quale, fits into the causal chain involving pain receptors in the skin, such that by the causal logic of sense perception, it is the quale that is experienced. But there is, in addition, a further argument that may be made for accepting the physical sciences' view of sensations, and that is in order to retain the view that sensations as we experience them play a causal role in relation to behaviour. It seems obvious, for example, that sudden sharp pains may cause us to wince or cry out, and it is the qualities we experience such sensations to have that produces this effect. Physical science, however, suggests that such involuntary, reflex, behaviour may be explained purely in terms of nerve activity, without the need to invoke anything characterised by a quale, so that if we are to retain the idea that it is indeed pain as experienced that produces this, without once more opting for obscurity by rejecting the scientific account, we must defend the position that, contrary to appearances, pain as experienced is itself quale-less. This accords, again, with the second clause of our definition of materialism, which has it that entities recognised by the physical sciences suffice to explain the spatial redistributions of objects in the world.

We see, then, that there are good reasons for adopting the physical sciences' view of sensations in preference to one that has them as

intrinsically non-physical items. To be able to adopt such a view would lend further support to the claims of materialism, but presupposes that we be entitled to over-rule the strong appearances to the contrary provided by our experience of sensations. We have, so far, concentrated on the fact they appear to possess qualia, as indicating their non-physical nature, but there are also other grounds deriving from our experience of sensations which reinforce this. In particular, there is our experience of the location of sensations, which, in view of its importance, may be considered under a separate heading.

6. The location objection

If we are to say that sensations are nothing but certain physical phenomena, as identified by neurophysiology, then it must be possible to locate sensations just where the latter phenomena are found. For, to say that sensations are nothing but certain physical phenomena is to assert an identity relation between the two entities, and by the principle generally accepted as governing relations of identity, Leibniz's Law, entities may be identical only if they have all their properties in common.[9] This principle may be said to derive its validity from the still more fundamental law of non-contradiction. For, if it were supposed that two entities were in fact identical without having all their properties in common, this would entail that one and the same entity both possesses and does not possess certain properties, which is a clear self-contradiction.

Accordingly, sensations must share the location of the physical phenomena with which it is proposed to identify them, and the usual suggestion considered by philosophers is that they be identified with brain phenomena, following the example of Smart's 'Sensations and brain processes'. On the basis of this, two prima facie different location objections arising from our experience of sensations have been

presented, as the following quotations illustrate. In the above mentioned article, Smart considers the objection that 'The afterimage is not in physical space. The brain process is. So the afterimage is not a brain process'.[10] The other objection is presented in T. Nagel's article, 'Physicalism', where he considers the fact that 'Brain processes are located in the brain, but a pain may be located in the shin'.[11] The location objection presented by reference to the afterimage is that sensations do not even belong to the same spatial system as brain processes, how, therefore, can they be held to be nothing but brain phenomena, or indeed anything else in the physical world. We may refer to this as the 'location in different spatial systems objection'. The objection presented by reference to pains is simply that pains have a different position in the body to the physical things which they are supposed to be. This may be referred to just as the 'different spatial locations objection'.

These objections may best be considered by beginning with the latter, since it might be argued that it results simply from an injudicious formulation of the identity the materialist requires. The fact that sensations tend (perhaps invariably) to be experienced in parts of the body other than the brain opposes only the idea that sensations are brain phenomena, and the question may, indeed, be asked as to why they should be identified with these latter at all. The suggestion we considered in the case of pain was that pain is the firing of receptor cells in the skin rather than a brain process, which seems to avoid the difficulty. The reason philosophers have tended not to adopt this view of the matter seems to have to do with the history of the debate over materialism, which has been intertwined with that over the mind-brain identity thesis, according to which the mind and mental phenomena are to be identified with the brain and brain phenomena. The different spatial locations objection indicates that this is an inappropriate framework in which to seek a physical reduction of

sensations.

Unfortunately, merely switching from brain processes to the firing of receptor cells does not entirely dispose of the different spatial locations objection, for there are instances where the location of the physical activity which neurophysiology identifies as the cause of a pain experience does not coincide with the part of the body where pain is experienced. Receptor firing in one part of the body may occasion pain sensations to a greater or lesser degree removed from that location. Sometimes, indeed, the disparity can be such that pain sensations are experienced as located outside the body altogether, and the case is then one that provides grounds for the more radical 'location in different spatial systems' objection. The usual example of such pains are the so-called 'phantom-limb' pains. People who have lost limbs are known to experience pains in regions of empty space which the limb they have lost would have occupied. The cause of these experiences is known to be the firing of nerve endings at the point of amputation , which once formed part of the transmission chain from pain receptors in the removed limb. When it is said that the pain is experienced in a region of empty space what is meant is that from an objective point of view, from the point of view of evidence available to percipients in general, there is nothing in the region in question corresponding to the object the subject of the pain experiences there. The pain seems, hence, not to be part of the inter-subjective spatial system addressed by physics and physical science, but forms part of a different spatial system, one to which the individual percipient alone has access. The same goes for afterimages, the items mentioned in the quotation from Smart that introduced the location in different spatial systems objection. When we see an afterimage against a distant wall, for example, there is nothing there, from an objective point of view, answering to the item we experience, so suggesting that the object is indeed not in physical space. The experience of an after-image nevertheless has physical causes, since it arises, as we saw, from the disordered state of the retina as a result of exposure to a bright light.

We have now found something in common to cases exemplifying the different spatial locations objection and the location in different spatial systems one, namely, that they are each instances of objects being experienced at locations other than that of the physical causes of those experiences. And, in fact, closer inspection casts doubt on the ability to distinguish the two objections. For, it indicates, to begin with, that sensations falling under the different spatial locations objection may be said to be no more and no less physically located than afterimages and phantom-limb pains, which exemplify the location in different spatial systems objection. When a person experiences a pain in a position in the body different to its known physical cause, that position is, from an objective point of view, no different to what it would have been had no pain been experienced there. The object experienced is hence on a par with phantom-limb pains and afterimages. It may thus be argued that no sensations located other than where their physical causes are found, fall within physical space. Yet, on the other hand, all sensations are located as if they were in physical space, for we speak, as we have seen, of an afterimage seen against a wall, or a pain in the leg even if there is no objective difference in its condition. The situation regarding the location of all sensations not corresponding to their physical causes is thus ambiguous - by the criterion of being objectively present, they are not in physical space; but they are still located by reference to items in physical space. The two location objections we have identified thus seem to represent not two different categories of sensations among those whose experienced location does not correspond to that of their physical causes, but different ways of regarding all such sensations.

It is not necessary, for present purposes, to try to adjudicate between these objections since they are each equally damaging so far as the incorporation of sensations within the physical sciences' account of the world is concerned. They each, moreover, depend for their force on the assumption that invariably, the actual location of sensations is where we experience them to be. Were this not assumed, we would not need to accept that because we experience a sensation as located differently to its physical cause, then the sensation in question is located differently to its physical cause, and the Leibniz's Law objection from different locations would disappear. Whether or not we are obliged to accept the above assumption will be a major concern in what follows. Certainly, again, a more coherent account of the world would result if it were invalidated. But, for the present, consideration of the problem of the location of sensations may be left with the conclusion that for the purposes of future discussion, we will refer to a single 'location objection', and understand by it simply that some sensations do not share a common location, on the basis of our experience of them, with their physical causes. This leaves open whether the lack of a common location relates solely to physical space, or involves the location of sensations outside it, in accordance with the above conclusion that a decision on this question has no bearing on the force of the objection.

7. Other problems about sensations

We have now identified two objections to the incorporation of sensations in a materialist account of the world as defined here - the objection that they are characterised by qualia, and the location objection. These will be the main ones for further consideration, although there are others that may at this point be mentioned in support of this concentration. First, it might

be said that sensations are unamenable to science in principle, because they are not intersubjectively accessible and only what is so accessible meets the scientific requirement of objectivity. The scientific concern with what is objective and intersubjective was, of course, indicated in the previous Section in connection with the location objection. The present argument, however, appeals not to the lack of intersubjective confirmation that there is something present where some sensations are experienced to be, but the point that no sensations are intersubjectively available because, as we said above, particular manifestations of sensations are confined to particular experiencing subjects. For that reason, they are unamenable to objective science. Against this objection it may, however, be responded, first, that science itself recognises entities that are not themselves available to the experience of any subject, but are rather inferred to be present on the basis of intersubjectively available evidence, as in the case of protons and electrons. To debar sensations, which may similarly be inferred from intersubjective evidence - such as pain behaviour, would imply repudiating the latter entities also. Second, physical science - in particular, the science of physiology - does in fact deal with sensations, but its treatment, of course, meets with philosophical objection, as when it wishes to locate them in physical space contrary to their experienced location. The present objection is thus not one that, it seems, needs further discussion.

Another objection, which is familiar in discussions of the attempt to identify mental and physical phenomena, is to the effect that beliefs about sensations and the like enjoy a 'special epistemological status', a status not shared by any beliefs relating to the subject matter of the physical sciences, from which it is inferred that the subject matters must be different, and hence that sensations cannot be

phenomena recognised by the physical sciences. There is reason to conclude that this argument may be rejected, but further consideration of it will be deferred until later when an appraisal of the doctrine of the Given in perceptual experience will be conducted, a doctrine that will emerge as crucial to the fate of materialism. The reason for the postponement is that the issue of special epistemological status in relation to things like sensations is a central tenet in the doctrine of the Given, and hence consideration of it now would be premature.

8. Other mental phenomena

Two problems about sensations may, it thus appears, be made the focus of attention in defending materialism: first, the problem posed by their exhibiting qualia; and, second, that of their experienced location. However, before leaving the discussion of sensations, a question that needs to be considered is whether the previously noted tendency of discussions of materialism to focus upon sensations is warranted. May there not be further problems for the defence of a materialist view of the world that arise if attention is paid to other mental phenomena, such as more elevated ones like thoughts, beliefs, and intentions? In this regard, it is certainly true that in the past a view of these phenomena was taken that rendered them incompatible with any account of the world meriting the description 'materialist', since they were believed to characterise Cartesian minds, as on the 'Official Doctrine' attacked by Ryle.[12] The lack of concern with phenomena like beliefs and intentions on the part of early participants in the recent debate on materialism, such as Smart and U.T. Place, is moreover explained by their following Ryle in taking a behaviourist view of such phenomena.[13] Thus, according to Place,

> In the case of cognitive concepts like 'knowing', 'believing', 'understanding', 'remembering', and volitional concepts like 'wanting', and 'intending', there can be little doubt that an analysis in terms of dispositions is fundamentally sound.[14]

By dispositions here is meant dispositions to overt, physical behaviour. To say, for example, that someone believes or intends something is to say that they are likely to behave in certain ways in certain circumstances, and nothing more. It is not, accordingly, to say anything about 'inner', non-physical causes of behaviour, as on the Cartesian view. Smart and Place, however, did not feel this sort of analysis could apply to sensations and kindred phenomena like mental images,[15] and since the behaviourist analysis rendered cognitive and volitional mental phenomena eminently compatible with a materialist view of the world, their attention naturally focussed upon those phenomena that appeared intractible to such an analysis, with the aim of showing that they too could be rendered compatible with a materialist view.

However, the prevailing view now, and with good reason, is that cognitive and volitional mental phenomena themselves resist a behaviourist analysis. For one thing, it does seem that the purpose of referring to beliefs and intentions and the like is to indicate causes of behaviour rather than merely being a convenient way of talking about how someone is or was likely to behave.[16] Then there are widely acknowledged difficulties about correlating particular beliefs, say, with certain patterns of behaviour such that given a particular pattern of behaviour, a particular belief may be inferred, as is implied by the claim that beliefs and the like are analysable in terms of behaviour. The need to impute unanalysed beliefs as conditions of such inferences unfortunately intrudes itself. Thus, as K. Wilkes puts it,

> Although it is an unimpeachable truism that beliefs and desires are attributable on the basis of behaviour, linguistic and non-linguistic, this truism needs supplementing: so long as we are also implicitly ascribing a further bundle of psychological traits in the background.[17]

If, therefore, cognitive and volitional mental phenomena do not admit of the behaviour disposition treatment to which early advocates of materialism subscribed, but are phenonomena that give rise to behaviour, the question arises again as to whether they are compatible with a materialist view of the world or not. In this regard, different answers have been forthcoming aimed at establishing such compatibility, in contrast to the traditional Cartesian view. The general idea is that talk of intentions and beliefs is a means of referring to causes of behaviour, but in a way that is neutral in regard to the intrinsic nature of those causes. Thus there is Armstrong's view that particular beliefs or intentions may be analysed as states of the person apt for bringing about certain sorts of behaviour. Then, also, there is the position of Putnam, which as previously mentioned,[18] seeks to analyse particular mental phenomena in terms not merely of causal relations to behaviour and stimulus inputs, but also of relations to other such phenomena, similarly analysed; a position which accords better with the observation of Wilkes that particular beliefs, for example, may only be attributed on the strength of certain behaviour given that other beliefs are attributed in the background. Putnam is further noted for the more specific proposal that mental phenomena may be analysed as the instantiation of 'Turing machine' functional states,[19] states which are defined in terms of their associated inputs and outputs, and their relations to other similarly defined states.

A decision on whether Putnam is right about this would involve a detailed appraisal of Turing machine functionalism, as has been conducted elsewhere.[20] As with Armstrong's more atomistic causal role treatment of mental phenomena, Putnam's position is a matter of controversy, as is the whole question of what account is to be given of cognitive and volitional mental phenomena, which are the present concern. But a key feature of the latter controversy is that it takes place against the background of a general acknowledgement that reference to beliefs and intentions and the like is a way of referring to causes of behaviour, but, as previously mentioned, in a way that does not presuppose any particular constituents present in the intrinsic structure of the world, although some such constituents must be involved.[21] What, in other words, seems to be accepted is that cognitive and volitional mental phenomena may be viewed in ways broadly in line with previous discussion here. The validity of this position found confirmation in the previous Chapter when it was shown, first, how people may have the same intention without the structures of their brain being physically the same, and how it was evidently intelligible to suppose that robots, artifacts whose physical structures may be quite different from humans, might, if of sufficient complexity, be such that they could be described as having beliefs or intentions.[22] Furthermore, introspection seems to yield no information as to the ontological status of what is present in the structure of the world when we have a certain belief or intention, in contrast to the case of sensations, where, as we have seen, reflection suggests that when we have a certain sensation we are confronted with an intrinsically non-physical item.

So far, then, it appears that a view of cognitive and volitional mental phenomena may be taken that does not give rise to a conflict

with materialism, certainly as understood here, insofar as their existence may be granted without our being committed also to a particular view as to the constituents and occurrences that characterise the intrinsic structure of the world. However, it may be responded that although a problem is not posed by beliefs and intentions as such - items that may be present at a certain time without our having any consciousness of the fact - a problem is posed by the conscious expressions of them by which we apprehend what we believe or intend. These expressions seem, in general, to take verbal form and need not involve public utterances, but rather the act of 'saying to oneself', or 'sub-vocal verbalisation', as psychologists call it. Such expressions of belief involve the use of auditory imagery, it seems, and hence the awareness of qualia - namely, ones derivative of the related mode of sense, hearing. Similarly, thought, at the conscious level, would appear to be conducted through the medium of sub-vocal verbalisation, and, additionally, visual imagery. If this view of our awareness of the conscious expression of beliefs and the like is accepted then there is a problem for the defence of materialism associated with the existence of cognitive and volitional mental phenomena even if it is not inherent to them. However, it does not follow from this that we need be concerned with other mental phenomena than sensations, since it would appear that if we are able to dispose of the problems about qualia and experienced locations that are posed by sensations, we can equally dispose of any problems about imagery and their qualia, whether the imagery be involved in the conscious expression of belief or elsewhere, as in dreams, a point to which we shall return.

## 9. Intentionality and intensionality

While addressing the question of whether a concentration upon sensations, out of the variety of mental phenomena, is justified, some

mention is appropriate concerning a characteristic that is particularly associated with cognitive and volitional mental phenomena and is prominent in recent discussion of them in the philosophy of mind, that of intentionality. This characteristic has been thought, on the one hand, to bear significantly on a materialist, or physicalist, account of the world, as when Armstrong writes that 'it is clear that no physicalist can accept the irreducibility of intentionality',[23] while Dennett has observed that 'the coexistence of physicalist doctrine with intentional or mentalistic vocabulary...is a typically undefended and unattacked feature of current discussions'.[24] Whether there is an incompatibility between intentionality and a materialist view of the world depends, of course, on what is understood by these notions. Armstrong is, as we saw, officially committed to a conception of materialism on which all descriptions of constituents of the world and their behaviour are ultimately dispensable in favour of those of physics, and, on that count alone, the irreducibility of descriptions involving intentionality would be inconsistent with it. But what of a less stringent conception of materialism such as has been adopted here, and is more widely favoured at the present time? To address this question the notion of intentionality must be introduced in more detail.

By the 'intentionality' of mental phenomena, as exemplified by beliefs and intentions, is meant their characteristic of being about or 'directed towards' certain objects or states of affairs.[25] Thus, suppose someone holds the false belief that there are unicorns on the moon. Then the situation is that the propositional content of that belief, the proposition that there are unicorns on the moon, seems to be about or directed towards objects, unicorns, that do not exist, and a state of affairs that does not exist, the presence of unicorns on the moon. An obvious problem about intentionality is

thus the apparent requirement of a relation of the mind, however that object is conceived, and non-existent entities in order to explain the mental phenomenon of holding certain beliefs.[26] And the first thing to be said about this problem is that it is neutral in regard to what sorts of thing, in their intrinsic nature, the mind or mental phenomena are conceived as being. A Cartesian mind is no more able than a physical brain to be related to non-existent entities. The problem is, hence, to explain the holding of a belief with a particular propositional content without recourse to a relation to non-existent entities, which is to be avoided because of its absurdity rather than any ontological conflicts it engenders. The logical course, then, appears to be to attempt to explain the intentionality of beliefs in terms of objects that do exist, so that the belief that there are unicorns on the moon is about the way things are in the world. This leads to the idea that beliefs, such as the latter, are (varyingly accurate) representations of the real world. There is, however, considerable controversy concerning how and to what extent the notion of beliefs as representations of the world may be analysed, and the utility of appealing to the notion of beliefs as represensations.[27] These matters intersect with the accounts of belief that we have already mentioned. Armstrong, for example, proposes an analysis of beliefs as representations based on the idea that they consist in capacities for selective or discriminatory behaviour with respect to physical objects, such that the directedness of beliefs towards objects reduces to the directedness of behaviour towards objects.[28] By contrast, according to Searle, 'it is not possible to give a logical analysis of the Intentionality of the mental in terms of simpler notions'.[29]

These controversies about intentionality proceed, however, against a background of agreement, as previously noted, that the ability of individuals to instantiate mental phenomena such as beliefs does not

imply any specific intrinsic composition on their part, or that the occurrences by which they do so are, in their intrinsic nature, such as to be beyond the scope of the physical sciences. There is thus nothing about the intentionality of cognitive and volitional mental phenomena which appears to conflict with materialism, as understood here, if this consensus view is correct, as we have argued it is. The compatibility of such mental phenomena with materialism, on the present understanding, to which the discussion of this Section and its predecessor have been directed, is moreover of considerable importance in our defence of materialism, since our solution to the problems of qualia and sensations will lean heavily on what we shall argue to be the essential belief-ladenness of perceptual experience. Such compatibility depends on the idea that the instantiation of a particular belief may intrinsically be nothing more than the occurrence of a certain brain phenomenon as characterised by the physical sciences, a rearrangement of spatial entities for which the physical sciences enable sufficient conditions to be stated; not, in view of previous discussion, necessarily the same brain phenomenon for each instance of the holding of a particular belief - it is not the intrinsic structural character of the brain phenomenon, but its extrinsic character, such as its causal role, that counts for its being the instantiation of the holding of a belief.

Before leaving the notion of intentionality, however, there is a related issue that also warrants some mention, namely, that of the 'intensionality' of descriptions by which particular cognitive and volitional phenomena are characterised.[30] Intensionality is a logical property of sentences that is ascribed on the basis of a number of tests that set them apart from the domain of standard truth functional and quantificational logic. One such test is

where a sentence contains a component sentence, or propositional clause, and the truth value of that component sentence does not affect the truth value of the sentence as a whole. Sentences ascribing beliefs and intentions are prime examples of ones that are intensional by this test. For example, 'John believes that there are unicorns on the moon' is a sentence whose truth value is not dependent on that of the contained sentence 'there are unicorns on the moon'. Since, moreover, discourse about intentionality requires the use of intensional idioms in this way, a tendency has been encouraged for discussion of intentionality to be subsumed under the discussion of intensional idioms.[31] And there is considerable overlap. Discussing the meaning of many intensional sentences (though not all of them[32]) will, as with ones relating to beliefs, occasion discussion of intentionality. Moreover, there are proposals by which intentionality may be analysed away, such as the behaviourism criticised at the start of the previous Section, which also serve as non-intensional analyses of intensional sentences. Nevertheless, the two notions must not, as Searle emphasises, be confused.[33]

Having now distinguished intensionality, a logical property of sentences, from intentionality, the property of mental phenomena of being about things, it may, further, be asked whether there is any problem arising specifically from the intensionality of sentences used to describe cognitive and volitional mental phenomena for materialism as understood here. In this regard, it may be noted that a major theme in Wilkes' book Physicalism is a problem she identifies for physicalism, understood as the theory that the physical sciences may explain human action, or purposive behaviour, arising from the fact that the description of actions requires intensional idioms, such as talk of intentions, whereas the physical sciences (enumerated

much as here) are free of these - they are 'extensional': they can be represented wholly in terms of standard truth functional and quantificational logic.[34] The problem seems, in essence, to be that if the physical sciences are to explain action and the like, these phenomena must be ones that those sciences recognise, and hence ones comprehended by the descriptions of the physical sciences. But then no descriptions offered by the physical sciences can be coextensive with any intensional description, for no non-intensional, extensional, sentences, such as entirely compose the statements of the physical sciences, have the same truth conditions as intensional ones.[35]

We shall not address here Wilkes' treatment of this problem, which involves the advocacy of a functional role methodology in psychology,[36] but rather consider how it bears on DM. The relevant clause of that definition of materialism is the second one.[37] It is apparent from this that the definition does not commit the physical sciences to explaining actions as such, but merely to the provision in principle of sufficient conditions for the occurrence of the rearrangements of spatial structures with which particular instances of action and purposive behaviour may be identified. In other words, the claim is that when we pick out a certain action we are also picking out a rearrangement of spatial structures which may be described purely extensionally, and the physical sciences enable sufficient conditions to be stated for its occurrence. This is not to deny the validity of the action description of course, for such descriptions, implying intentions and the like, are among those 'other descriptions' allowed for in DM. What does follow, however, is that DM is not beset by Wilkes' problem about intensionality.

## 10. Consciousness

With this, we may conclude that there seem to be no problems for materialism as understood here, that are posed by the intentionality

exhibited by cognitive and volitional mental phenomena, or the intensionality of descriptions by which they are characterised. The only additional problem they have contributed is that of their associated imagery, but this appears of a piece with the problems of sensations and qualia previously identified. So far, then, we can go along, albeit for different reasons, with the tendency established by Place and Smart of concentrating on the latter phenomena.

But it cannot yet be concluded that attention may be confined to sensations, for there is another mental phenomenon that has thus far been neglected, that of consciousness itself. Consciousness, or in other words experience, has something in common with beliefs and intentions in that it is directed towards objects, it has content. The directedness here does not, however, seem aptly described as that of being about certain objects; rather it is conceived, typically, as an act by which content is apprehended by the experiencing subject, as will be further discussed later in connection with perceptual experience. Now prima facie, there seems no more reason to suppose the directedness of consciousness is any more problematic for materialism as understood here than that of beliefs and intentions. The apprehension of objects would appear to be a functional role that could, in principle, be realised by structural processes wholly compatible with a physical science account of these latter. But to this it might be responded that there are, it seems, facts about the occurrence of consciousness which suggest that the intrinsic nature of what takes place may not be accommodated in the framework of the physical sciences. Physical science would wish to say that for consciousness to occur is for a certain brain process to be undergone. However, this view is one that meets with the objection that whereas a brain process is a spatio-temporal phenomenon, the occurrence of consciousness involves something that takes place in time only, so encouraging a Cartesian conception of the experiencing

subject as something that itself exists in time alone, again quite contrary to the ontological commitments of materialism.

But then the assumption that consciousness in its intrinsic nature, or in its structural realisation, is something that exists in time alone may be questioned. Consciousness, in its intrinsic nature, has been noted to be a 'transparent and featureless' notion.[38] This is to say, our concept of consciousness, while embodying functional commitments such as the idea of its involving the apprehension of content, is non-committal as to the intrinsic nature of the occurrence. There is, of course, the aforesaid idea that consciousness exists in time, but beyond this the concept does not go. Rather, then, than excluding the possibility of consciousness being a spatial phenomenon, or indeed, a brain phenomenon, the concept leaves this open. Accordingly, it may be argued that the idea that consciousness exists in time alone results from a mistaken construal of the concept, by which the fact it is silent over whether consciousness exists in space is taken to exclude its doing so.

Besides the above, there are, though, other problems that may be raised concerning the structural realisation of consciousness, notably over how the role of apprehending content may be realised within a physical science framework. Our concern with this will be with particular reference to perceptual experience, the form of consciousness that is the main concern here, where one problem relating to the apprehension of content arises from the fact that the content apprehended consists in objects at a distance removed from the experiencing subject, and another from the fact we seem, in perceptual experience, to be immediately confronted with such objects. Further consideration of these difficulties will be deferred until Chapter 11, for it will emerge that they do not require anything like the degree of attention, as problems for

the defence of materialism, that the problems of qualia and sensations do, and our consideration of the latter problems goes far to removing them.

11. The defence of materialism - Analytical and Revisionary approaches

With this, we have now covered the main varieties of mental phenomena that might be thought to give rise to additional conflict with materialism to that posed by qualia and sensations, and are able to conclude that there is after all no conflict which may not be treated via a consideration of those phenomena. This conclusion has been reached, first, from our appraisal of cognitive and volitional mental phenomena. These, we have found, are properly viewed as relating to processes in the individual that give rise to behaviour, but as such, the only conflict with materialism, as defined in DM, is posed by the imagery involved in their conscious expression, and this is essentially a problem about qualia. Intentionality and intensionality, the other features of these phenomena which appeared problematic, proved to be ones which are in fact compatible with DM and the generally held views of materialism of the present time. This conclusion is of wider importance in the present discussion in that it leaves us at liberty to appeal to beliefs later on in our resolution of the problems of qualia and sensations. We have, further, recently seen that such problems as consciousness itself poses may themselves be tackled by way of the treatment of qualia and sensations.

Since much hinges upon the attempt to overcome the problems of qualia and sensations, it is appropriate to conclude this Chapter by offering a broad outline of how these problems will be addressed in what follows. Prior to doing so it will, however, assist if, for future purposes, the main characteristics of qualia and sensations, as they have been introduced in this Chapter, are summarised: Let us take first qualia:

(1) Qualia are simple, homogeneous, spatially extended qualities which appear to the respective senses when Secondary Qualities and sensations are experienced.

(2) To each qualitative distinction we are able to make within the various kinds of Secondary Quality and sensation, there corresponds such a quale.

(3) Qualia are indefinable or unanalysable so far as their intrinsic nature is concerned - the intrinsic character of a particular quale may, therefore, be known only through experiencing it, otherwise referred to as acquaintance.

(4) We discriminate Secondary Qualities and sensations by the experience of qualia.

Next, sensations:

(1) These are spatially extended objects that are presented as the contents of certain perceptual experiences; but

(2) Unlike other such contents, notably environmental objects, they are experienced only by a single person in any particular instance, lending to their classification as mental phenomena.

(3) They are characterised by qualia.

(4) The experienced location of sensations frequently does not coincide with the location of the physical activity that causes their experience.

There is also a common characteristic:

Neither qualia nor sensations, as thus understood, are admitted by the physical sciences.

Now if, as we have claimed, there is a strong case for trying to defend the view of materialism that we need admit no entities understood in these terms, the question is how such a defence may be conducted. That such a defence is required is undeniable, for materialism seems to require that we disavow what reflection suggests are plainly present features in our experience. It seems obvious that there are qualia as defined above, and so materialism requires that we deny the obvious. The matter has

been provocatively put by the objection that a materialist must 'pretend to be anaesthetised',[39] insofar, in this case, as he requires that we fail to notice such constituents. The force of this objection will become apparent in the next Chapter when we begin consideration of the two main approaches that may be identified by which materialism may be defended, and this Chapter ends with an introduction of these approaches.

Among the received defences of materialism, it is possible to distinguish two sorts of approach, which may be referred to respectively as the 'Analytical Approach' and the 'Revisionary Approach'. According to Analytical Approach, which is characteristic of the defences presented by Smart and Armstrong, the concepts by which we describe perceptual experience are, if correctly analysed, compatible with the truth of materialism. Secondary Quality and sensation concepts leave room for the intrinsic nature of the entities to which they relate to be purely physical, just as does consciousness. The Revisionary Approach is taken by philosophers such as Quine, Rorty, and Feyerabend. It involves the recognition that existing concepts are indeed committed to the existence of entities incompatible with materialism, but holds that there is no necessity for the retention of those concepts. We are free to revise our descriptions of perceptual experience, as much as anything else, in the interests of a more coherent, simple, and comprehensible account of the world.

We shall argue here that the Revisionary Approach is the one which is ultimately successful, and that crucial to its success is a refutation of the idea that there is a content that is Given in perceptual experience which any adequate account of the world must recognise, a conclusion that owes its inspiration to the arguments of Rorty and W. Sellars. First, however, it is necessary to expose the deficiences of the Analytical Approach, which will be the subject of the following two Chapters.

## CHAPTER 3

## The Analytical Approach, acquaintance and the chicken sexer objection

### 1. Summary of Chapter

The present Chapter begins by examining the claim of the Analytical Approach that our existing concepts relating to perceptual experience allow room for the truth of materialism. It does so having regard to prominent examples of this approach to the defence of materialism, including both analyses that have been presented specifically for that purpose, such as Smart's topic-neutral description account of sensation reports, and accounts of perceptual experience that have been addressed to wider issues, notably the 'Belief' Analysis associated with Armstrong, and the 'Adverbial' Analysis presented by Chisholm. These latter are argued to be crucial to the Analytical Approach since all received examples of it appeal to one or other of these accounts of perceptual experience. The question is, however, what is meant by 'our existing concepts', and it is decided that the Analytical Approach in effect asserts that ordinary discourse and commonsense beliefs about perceptual experience are compatible with the truth of materialism.

Against this claim, a philosophical account of perceptual experience, associated notably with Russell, is presented which confirms earlier assertions that materialism is refuted by perceptual experience. This is referred to as the Acquaintance Analysis, and it is introduced as a set of propositions, which may be summarised as the claim that perceptual experience is an awareness of content that is both distinct from and the ultimate basis for the beliefs we hold about the world. The Acquaintance Analysis is the prime target of accounts of perceptual experience that fall within the Analytical Approach, but, contrary to these, it has a strong prima facie claim itself to accord with ordinary discourse and commonsense beliefs. It is, in particular, favoured by what is claimed

to be the generic objection to the Analytical Approach, which is that it assimilates perceptual experience, which is a conscious occurrence if anything is, to an unconscious mental event such as occurs in the unusual case of chicken sexing. Just how the various examples of the Analytical Approach succumb to this objection is discussed in the following Chapter.

2. What is the Analytical Approach to the defence of materialism?

In the previous Chapter, the Analytical Approach was briefly introduced as involving essentially the claim that the concepts by which we characterise perceptual experience, if correctly analysed, are compatible with the truth of materialism. They are not specific enough in their ontological commitments to contradict it, and so 'leave room' for it to turn out either true or false depending on the outcome of scientific inquiry. Accordingly, the defence of materialism requires no dramatic revision of our existing conceptual scheme, so avoiding a situation for advocates of the theory that Armstrong, for one, regards as 'desperate indeed'.[1] Whether the Revisionary Approach does inevitably create such a situation will later be doubted, but the present concern is whether the claim of the Analytical Approach may be sustained.

To more fully appreciate this approach, it is necessary to provide some examples of it, and for these we may look first to the views of its leading advocates, Smart and Armstrong, some mention of which has already been made. In earlier Chapters it was, for example, observed that, according to Armstrong, talk of mental states is to be construed as referring to 'a state of the person apt for bringing about a certain sort of behaviour'. The intrinsic nature of such states may hence be either physical or non-physical, in the sense that it may be something that may or may not turn out to be embraced by the physical sciences. A more directly relevant instance of the Analytical Approach from

Armstrong, in relation to present concerns is, however, his suggestion that our existing Secondary Quality concepts do not in fact commit us to the recognition of intrinsically non-physical qualities - qualia. They are, rather, quite open as to what the intrinsic natures of Secondary Qualities are. Thus he invites us to:

> Suppose that our concept of red is all blank or gap? May it not be that we know nothing about what redness is in its own nature? May it not be that we know only contingent truths about redness?[2]

If these suppositions are correct, as Armstrong believes, then the problem of Secondary Quality qualia, which were supposed to characterise the intrinsic and essential nature of any given Secondary Quality, is really a pseudo-problem arising from a mistaken account of the concepts concerned.

But perhaps the most famous example of the Analytical Approach is the 'topic-neutral description' analysis of sensation reports that is offered by Smart. According to this, there is no implication, in such reports, of the presence of inherently non-physical objects, as he illustrates by the previously encountered explanation of what the report of a yellowish-orange afterimage amounts to: namely, the claim that 'There is something going on which is like what is going on when I have my eyes open... and there is an orange illuminated in good light in front of me'.[3] This representation of sensation reports is 'topic-neutral' in the sense that it is neutral or non-committal on the crucial topic of the intrinsic nature of what is being reported. Talk of 'something going on', which is further specified purely by reference to likenesses to what happens under certain public conditions, carries no implication that what is going on is the experience of a non-physical object. All that may indeed be happening is, as Smart would claim, the occurrence of a certain brain process.

However, as well as analyses that have been forthcoming specifically in defence of materialism, a consideration of the Analytical Approach must also examine ones that have been directed to wider objectives, notably within the philosophy of perception. This is, first, because to a large degree the examples of the Analytical Approach that have been directed against the problems of qualia and of sensations, as described above, are derivative of the latter analyses. Second, these further analyses have themselves been used by philosophers in defending materialism. Two examples in particular must be considered: namely, the 'Belief Analysis' of perceptual experience associated with Armstrong,[4] and the 'Adverbial Analysis' offered by R.M. Chisholm.[5] The Belief Analysis is appealed to by Armstrong himself in defending materialism, while the Adverbial one is encountered in defences by, for example, J. Cornman,[6] M.E. Levin,[7] and also, arguably, Smart.[8] That analyses of perceptual experience should figure prominently in the defence of materialism is, indeed, wholly to be expected given that crucial problems for its defence are posed by the content of that experience. Because, moreover, Armstrong's proposals about the analysis of Secondary Quality concepts and Smart's ones about sensation reports are derivative of the wider accounts of perceptual experience - we shall argue that the former derives from the Belief Analysis and the latter from the Adverbial - these wider accounts are crucial to the whole Analytical Approach. It will also emerge that all received manifestations of that approach are committed to an unacceptable impoverished account of our perceptual experience, making the account of that experience the inevitable focus of attention in appraising the Analytical Approach.

More will be said about this generic criticism of the Analytical Approach later in the Chapter, but first there are further questions

about how this approach is to be construed that must be settled. We said at the outset that the Analytical Approach makes the essential claim that the concepts by which we characterise perceptual experience, if correctly analysed, are compatible with the truth of materialism. But what concepts are referred to here as the 'ones by which we characterise perceptual experience'? Not all the ways by which perceptual experience is conceived can be intended, for there is a prominent philosophical conception which, as will be argued, is inherently incompatible with materialism and no adequate or correct analysis of it could possibly show otherwise. Rather, the concern of the Analytical Approach is with ordinary commonsense conceptions of, and discourse about, perceptual experience. It is these that are to be correctly analysed. Thus, Smart is quite explicit that his claim is that 'in ordinary language reports of sensations are neutral between materialism and dualism'.[9] Also, when Armstrong supposes our concept of red is 'all blank or gap', he is opposing philosophical accounts which give an essential role in the concept to acquaintance with qualia, so implying that it is the ordinary, non-philosophical, view that he is referring to by 'our concept'. Elsewhere, too, he tests his Belief Analysis of perceptual experience by whether it can accommodate distinctions that would be drawn in ordinary discourse.[10] Likewise, in his Adverbial Analysis of perceptual experience Chisholm seeks to paraphrase ordinary descriptions of that experience so as to show how to avoid awkward philosophical questions[11] in interpreting it.

The Analytical Approach can thus be viewed as an application of linguistic philosophy to the defence of materialism. As such, it might be objected that even if the analyses offered are adequate to ordinary discourse, this is irrelevant to philosophical criticism of materialism because the latter involves a consideration of perception at a level of scrutiny that ordinary language is not adequate to.

It shall, however, emerge in this Chapter that the philosophical view of perception that stands most clearly opposed to materialism can itself claim to find support in ordinary discourse and commonsense beliefs; and it also turns out that the Analytical Approach fails on its own terms, since there is at least one fundamental distinction that ordinary discourse and commonsense would insist on that this approach is demonstrably incapable of accommodating. The distinction concerned is between conscious perceptual experiences and unusual perceptual episodes that constitute evidence of unconscious mental events. This distinction may further be viewed as an indisputable fact about perceptual experience that tells against any account of this experience that fails to accommodate it, independently of the attempt specifically to do justice to ordinary discourse and commonsense.

What is meant by the Analytical Approach is something that may now be summarised by way of a definition. We may say that:

> A defence of materialism takes the Analytical Approach if (and only if) it appeals to an analysis of ordinary commonsense discourse about, or beliefs relating to, perceptual experience according to which they are held to leave room for the truth of materialism by not implying the existence of anything that materialism must disallow.

It has also been argued: (1) that there is a generic objection to the Analytical Approach which is based on an evidently indisputable fact about perceptual experience, and is hence a more general constraint upon accounts of that experience; and (2) there is a prominent philosophical representation of perceptual experience that can both claim the support of ordinary discourse and commonsense, and is inherently incompatible with materialism. It may, moreover, be argued that the objection cited in (1) implies the representation of perceptual

experience mentioned in (2), so that the Analytical Approach is refuted. Whether (1) and (2) are connected in this way will be a major concern in what follows, and for the remainder of this Chapter, the task will be to elaborate upon them. First, the need is to present the rival conception of perceptual experience, a conception which examples of the Analytical Approach are typically advanced in opposition to, and which will be referred to, for reasons that will become apparent, as the 'Acquaintance Analysis'.

3. Perceptual experience - the Acquaintance Analysis

As a preliminary, it is worth repeating what in its broadest terms we have taken perceptual experience to be. Early in the opening Chapter it was proposed that the term 'perceptual experience' be understood as referring to:

> Experiences of kinds that are had when we perceive, or seem to perceive, something in the environment or in our body; experiences that are the essential means by which we come by our judgements about how the world is at any given time.

Now, at the outset, it should be noted that when, in what follows, views are ascribed to philosophers concerning the nature of perceptual experience, the intention is not to imply that they in fact use the term 'perceptual experience', as, for example, Armstrong[12] does do, but merely that they seek to give an account of experiences of the sorts mentioned in this definition. To do so is further to recognise, as is implied by the above definition, that the character of an experience may be consciously the same whether, for example, it is a case of seeing something in the environment, or is merely one of seeming to see something there - when there may be nothing of the sort in question present.[13] In support of this, it can be argued that unless there is such a common character to seeing and seeming to see, it is difficult to explain how we are ever deceived by our senses, or why we should ever draw this distinction. These

views are concurred with here. Opinions differ, however, on how this common character of perceptual experiences, as exemplified by the visual case, is to be portrayed. Another equally contentious issue is how, given that perceptual experience is the essential means by which we come by our judgements about how the world is at any given time, perceptual experience actually relates to the acquisition of beliefs that this role entails. It is with regard to these issues that the Acquaintance Analysis may be distinguished from the rival theories offered by the Analytical Approach.

In presenting the features that thus distinguish the Acquaintance Analysis, mention must be made, first, of the philosophers whose views have been drawn upon in its formulation. Foremost among these is Bertrand Russell, whose doctrine of 'acquaintance' gives the title to the Acquaintance Analysis, although another philosopher, whose stance on perceptual experience also displays the main elements of the Acquaintance Analysis is H.H. Price. It should be emphasised that the intention is not to incorporate in their entirety the views of either philosopher, but only ones that appear most salient to the criticism of materialism; ones which in addition have, as we shall see, permeated the recent debate over materialism, although their influence is seldom acknowledged by those whose arguments imply the Acquaintance Analysis or something very like it. The ideas incorporated in the analysis may be viewed in large measure, as being, moreover, simply a continuation in the present century of the Empiricist tradition, in which experience is the last court of appeal for claims to knowledge relating to contingent truths.

Now the first way in which the Acquaintance Analysis may be distinguished from its Analytical Approach rivals is in its treatment of perceptual experience as act-object in character. Russell's

commitment to the act-object character of this experience is indicated by his use of the term 'acquaintance', which is always acquaintance with something, to emphasise his conclusion that 'experiencing must be a relation in which one term is the object experienced, while the other term is that which experiences'.[14] For Price, too, perceptual experience involves acquaintance, the occurrence of which he refers to as 'sensing'.[15] The view that perceptual experience is act-object in character is also in accordance with the observation in the previous Chapter that perceptual experience is a form of consciousness and consciousness, in general, involves the apprehension of content.[16]

Now, one departure from the Acquaintance Analysis, and indeed the standard view of consciousness that we have thus far abided by, that is made within the Analytical Approach is the rejection of the idea that perceptual experience is act-object in character. As we shall see, this is the mark of the Adverbial Analysis of perceptual experience. By contrast, the Belief Analysis, the other main account of perceptual experience falling within the Analytical Approach, departs from the Acquaintance Analysis not over the involvement of a relation to content but over the sort of content that we are aware of. According to the Belief Analysis, the content of which we are aware in perceptual experience consists of no more than certain sorts of belief - notably about the state of the percipient's body or environment; whereas, for those whose views are being drawn upon to formulate the Acquaintance Analysis, and by no means only them, the characteristic content of perceptual experience consists of spatio-temporal objects or qualities. For each and every perceptual experience, in other words, there is a spatio-temporal object or quality of which experience is had.

Obvious candidates for inclusion among the spatio-temporal objects that feature in perceptual experience on the Acquaintance Analysis are objects in the environment - certainly when it is the case that our experience is that of perceiving something in the environment.

But we have also argued that bodily sensations may be regarded as spatio-temporal contents of perceptual experience, so they also are candidates. If, moreover, an experience where, say, we seem to see an environmental object, but fail to do so, is to be just like one where we do see such an object in other respects, in accordance with the conviction that the two cases may have a common character, then the object presented in the former case must itself be spatio-temporal and qualitatively similar to environmental ones, or the likeness will fail. For, what distinguishes, or renders similar, experiences on the act-object view is the content apprehended, not the act of experiencing itself, which is transparent and featureless.[17] With the admission of these non-environmental objects, of which afterimages are an obvious example, the question arises as to whether they may be regarded as constituents of the physical world, the unitary spatio-temporal system addressed by physical science, at all. Usually, indeed, they are deemed to be mental, denizens of a spatio-temporal system of which the individual percipient alone has experience. This, certainly, was the position of Russell.[18] But another possibility is that they are part of the physical domain but still such that only the individual percipient may experience them, as would be the case if they were brain phenomena.[19] Either way, it has been held that once any such non-environmental objects are conceded as contents of perceptual experience, the conclusion forces itself that these are the only sorts of objects that form the content of such experience. Their relation to environmental objects is that of representing them.

The question, thus, is whether admitting the experience of non-environmental objects, as the Acquaintance Analysis requires in claiming that for each perceptual experience there is a spatial object of which experience is had, does lead inexorably to a representative theory of perception and the denial that environmental

objects are ever contents of perceptual experience. Armstrong, for one, certainly believes this,and his response is to try to exclude such objects,or 'sensory items' as he calls them, from the account of perceptual experience altogether.[20] Russell himself, it should also be noted, was an advocate of a representative theory.[21] However, it is by no means clear that the admission of non-environmental objects for some perceptual experiences entails admitting them for all, as will be confirmed in the concluding stages of the present discussion.[22] Also, as we said, the concern in formulating the Acquaintance Analysis is not to incorporate the views of any particular philosopher in their entirety,but to draw upon salient points in relation to the appraisal of materialism.

With this, the first of four propositions may be presented as specifying the Acquaintance Analysis as it shall be understood here:

A1)In all instances of perceptual experience there is an act of awareness, usually referred to as 'acquaintance', by which content is apprehended, and this content consists of spatio-temporal objects or qualities, which may or may not in any given case constitute part of the percipient's environment or the physical domain itself.

The specification of the content of perceptual experience offered here deliberately leaves open the precise ontological status of the contents of perceptual experience beyond the essential claim that they are spatio-temporal objects and qualities. As such, it can command the assent of the philosophers drawn upon in formulating the Acquaintance Analysis without begging unnecessary questions. It is also a specification that will be given wider currency in the present discussion. When,in future, we refer to the content of perceptual experience,this will be intended to signify spatio-temporal objects or qualities, for it would appear that insofar as perceptual experience has a characteristic content,it consists of such items. An exception will be when the Belief Analysis

is discussed, where an alternative conception of that content is suggested, according to which it consists of beliefs. This analysis is, in effect, a repudiation of a characteristic content for perceptual experience, in that beliefs may just as much be the content of introspective reflection and the like.

To proceed further in formulating the Acquaintance Analysis, it is necessary to consider the relation of perceptual experience to beliefs that it recognises, and this shall be the task of the next Section.

4. The role of beliefs in the Acquaintance Analysis

A clear and unequivocal account of the relation of beliefs to perceptual experience that may be drawn upon in formulating the Acquaintance Analysis is that provided by Russell in his The problems of philosophy. In the latter work, Russell distinguishes between two kinds of knowledge, knowledge of things and knowledge of truths. Of the two senses of 'knowledge' thus identified, he further claims that knowledge of truths is 'the sense which applies to our beliefs and convictions'.[23] There are, in addition, two forms that knowledge of things may take: knowledge of truths about them, and knowledge by acquaintance. Of these, knowledge by acquaintance plays a special role since, according to Russell, 'all knowledge, both knowledge of things and knowledge of truths, rests upon acquaintance as its foundation'.[24] Now, by acquaintance here is meant just the sort of occurrence described in A1 above. To have that sort of awareness is hence to possess the type of knowledge which is the foundation of all knowledge. And the final point of importance for the present purposes is that, in Russell's words, 'things with which I have acquaintance are things immediately known to me just as they are', and, by things 'immediately known', he means things known 'without the intermediary of any process of inference or any knowledge of truths'.[25]

Now, from this account of acquaintance and its relation to knowledge of truths, a further two propositions about perceptual experience may be added to A1 in specifying the Acquaintance Analysis. The first is that acquaintance as in A1 does not presuppose beliefs in order for the awareness involved to occur. It is not, in other words, required that the content be taken to be or classified as of a certain character in order for us to be aware of it; it is, rather, by virtue of the awareness of content in acquaintance that we know it to have a certain character. For, as we just noted, to be acquainted with something is for it to be immediately known and that means known without any involvement of knowledge of truths, the sort of knowledge which Russell says applies to beliefs and convictions. If beliefs were involved in the awareness had in acquaintance, the sort of knowledge had would thus, contrary to this, be knowledge of truths. Also, if acquaintance involved beliefs then, again contrary to Russell, not all knowledge of truths would rest upon acquaintance as its foundation, since those involved in acquaintance would not do so. The second proposition about acquaintance that may thus be formulated, proposition A2, for reference purposes, is that:

> It is not a condition of the occurrence of acquaintance (as defined in A1) that beliefs be held, applied, or acquired.

More obviously entailed by Russell's remarks, is a second addition to A1 concerning the role of acquaintance: namely, that the role of acquaintance is that of providing the grounds, according to him, the ultimate grounds, for accepting beliefs about the world - all such knowledge, to repeat, rests upon acquaintance as its foundation. There can be no stronger reason for accepting beliefs about what is present there than their being based upon acquaintance. Accordingly, a further proposition, A3, may be added, stating that:

> Acquaintance constitutes our ultimate reason for holding the beliefs we do about how the world is, a form of knowledge upon which all knowledge of the world ultimately depends.

Another philosopher who has expressed views that are in agreement with A2 and A3 is Price. According to him, the process of sensing, which corresponds to acquaintance as specified by A1, involves no 'inference, nor any other intellectual processes'.[26] This suggests that he would endorse A2, since holding, applying or acquiring beliefs would seem to imply just such processes. And, as for the commitment to A3, strong evidence that he shares this with Russell is provided by the following claim, expressing a conclusion from the opening Chapter of Price's book Perception :

> It is clear now that all our beliefs about the material world are based directly or indirectly upon the sensing of visual and tactual sense data, meaning by 'based' that if we were not from time to time acquainted with visual and tactual sense data, these beliefs could neither exist nor be justified.[27]

(By 'sense data' here may be understood contents of acquaintance as in A1).

Finally, a decision needs to be reached over whether beliefs, although not involved in acquaintance, should nevertheless be recognised as an element in perceptual experience within the terms of the Acquaintance Analysis. Certainly, contemporary philosophers tend to insist that beliefs be an integral component of perceptual experience, as evidenced, for example, by the degree of sympathy the Belief Analysis receives. That analysis would be out of the question if beliefs were held to be consequences of rather than intrinsic to perceptual experience. For Price and Russell, moreover, perceptual episodes are held to involve, in general, an element involving beliefs, or something akin to them, in addition to acquaintance. Thus, according to Russell, 'it

would be rash to assume that human beings ever, in fact, have acquaintance with things without at the same time knowing some truth about them'.[28] Price similarly recognises a 'non-sensuous mode of consciousness in addition to sensing' which he calls 'perceptual consciousness', something that involves 'a form of taking for granted'[29] in relation to the content of acquaintance, notably to the effect that material things are manifest. Each insists, however, on the distinctness of the awareness of beliefs and the like from acquaintance, and, by their endorsement of A3, that beliefs are consequent upon acquaintance. Their position is thus one that recognises concurrent experiences, and, of these, acquaintance is that which, by our earlier definition, counts as perceptual experience proper since it is that which is identified as the essential means by which we come by our judgements about how the world is at any given time. Recent criticism of views of the sort embodied in the Acquaintance Analysis as thusfar formulated has similarly taken the position to be one that does not regard beliefs as intrinsic to perceptual experience. Armstrong, for example, has such views in mind when he opposes the idea that 'we ought to make a distinction between the beliefs that we acquire in perception and the perceptual experiences on which these beliefs are based'.[30] For these reasons, a final proposition, A4, may be added to the specification of the Acquaintance Analysis, stating that:

> Beliefs are not constituent elements in perceptual experience but are consequences of it (perhaps invariable consequences).

5. The Acquaintance Analysis, commonsense and the refutation of materialism

The Acquaintance Analysis has now been specified by means of four propositions, and since these will be of importance for later discussion, it is worth presenting them together. Thus we have:

> A1: In all instances of perceptual experience there is an act of awareness, usually referred to as 'acquaintance', by which content is apprehended, and this content consists of spatio-temporal objects or qualities, which

may or may not in any given case constitute part of the percipient's environment or the physical domain itself.

A2: It is not a condition of the occurrence of acquaintance (as defined in A1) that beliefs be held, applied or acquired.

A3: Acquaintance constitutes our ultimate reason for holding the beliefs we do about how the world is, and is a form of knowledge upon which all knowledge of the world ultimately depends.

A4: Beliefs are not constituent elements in perceptual experience, but are consequences of it (perhaps invariable consequences).

It may further be argued that the Acquaintance Analysis has itself a strong prima facie claim to do justice to ordinary discourse and commonsense beliefs about perception. To begin with, it is a commonplace in the philosophy of perception that there are two uses of verbs of perception, the first being where the verb is followed by mention of an object, as where, for example, someone is said to see an open door, and the second where it is followed by a propositional clause, as where it is said that someone sees that a door is open. The latter, propositional, use of verbs of perception serves to record beliefs that are acquired in perceptual episodes. But it is the former, non-propositional, use that appears in ordinary discourse to be fundamental, serving to report the experiences by virtue of which perceptual beliefs are held. Thus, someone sees that a door is open because he sees an open door. Moreover, it is common for people to say such things as 'if you don't believe it, go and see for yourself', which seems to imply a distinction between beliefs on the one hand and, on the other, the perceptual experiences that are their ground. Acquaintance with things, as the Acquaintance Analysis has it, is, it thus seems, according to commonsense also, both distinct

from and the ultimate basis for beliefs about the world. The Belief Analysis, to be discussed in the next Chapter, will accordingly have some difficulty, it would appear, with its suggestion that perceptual experience is purely a matter of acquiring beliefs, and that such a representation accords with ordinary discourse.

If the Acquaintance Analysis does in fact provide a correct account of ordinary discourse and commonsense beliefs about perceptual experience, it is also clear that the latter do not in fact leave room for the truth of materialism. For, among the items that derive their claim to recognition in our ontology from acquaintance, if any do, are qualia. The Acquaintance Analysis gives clear sense to the idea, introduced in the previous Chapter, that perceptual experience obliges us to recognise those entities: it is the fact we are acquainted with simple, homogeneous, intrinsically indefinable qualities when, for example, we encounter different colours, that enforces the belief that qualia, rather than complex, indefinable entities of the sorts recognised by the physical sciences, are present in these circumstances. Qualia are things we know to be present by acquaintance.

But it could perhaps be disputed that the Acquaintance Analysis does inevitably exclude the physical sciences' account of Secondary Qualities. For, although qualia are commonly suggested as things which must be recognised on the basis of acquaintance, could it not, on the other hand, be claimed that electromagnetic radiation may equally be said on that basis to be present when, say, we see a particular colour. The answer, unfortunately for the materialist, is that this is not so. The belief in electromagnetic radiation is patently not one that may be grounded on a non-belief-laden awareness, as acquaintance is conceived to be. For, the supposition that electromagnetic radiation is present in a given situation carries the implication that there are items present, such as the individual photons and the wavelength patterns

their motion exhibits, that we clearly have no perceptual awareness of in their own right. A non-belief-laden awareness would therefore give no indication that electromagnetic radiation, a phenomenon composed of these sorts of entity, was present. Rather, for our experience on a given occasion to lead us to say that we were detecting electromagnetic radiation, it would itself have to involve the belief that something was present having just the required sub-visible constitutents, and hence to be belief-laden awareness, quite contrary to the notion of acquaintance. No comparable 'background assumptions' have to be made for the experience of qualia - as has been said of sense data, their goods 'are entirely in the shop window'.[31] Thus, the Acquaintance Analysis does indeed exclude the account of Secondary Qualities that materialism seeks to give. And, if it is, further, the correct account of ordinary discourse and commonsense beliefs about perceptual experience, the claim that materialism is consistent with these latter is refuted. The question would then be whether these commonsense convictions must be retained.

There is, furthermore, an argument that does suggest the necessity of the Acquaintance Analysis; namely, the aforementioned generic objection to the Analytical Approach, to the effect that it assimilates all perceptual experiences to unconscious mental events. The present Chapter now ends with an introductory consideration of that objection.

6. The Chicken sexer objection

In a section of A materialist theory of the mind entitled 'Unconscious mental process', Armstrong describes the case of chicken sexers.[32] These individuals have the task of sorting newly-hatched chickens into batches of males and females, and are known to do so by looking at them. Chicken sexers are trained, Armstrong points out, by being shown photographs of such chickens, whose sex is known. It must therefore be that chicken sexers perform their task by means of characteristics that present themselves to the eyes, but what makes

the case odd, and an evident manifestation of unconscious mental processes is that chicken sexers are not conscious of any visible difference between the two sorts of chicken. Consciously, both sexes look the same. Nevertheless, when they look at a particular chicken they acquire a belief or judgement as to its sex, and these beliefs are, as a result of the training, to a high degree accurate. The visual characteristics that enable such judgements to be made must thus, as Armstrong fully acknowledges,[33] be perceived unconsciously.

Ordinary cases of perception are, by contrast, conscious mental events, if any mental events have this status. It will, therefore, be a crucial objection to any account of perceptual experience if the account in question assimilates ordinary perceptual experiences to the highly unusual perceptual episode that occurs in the case of chicken sexing, which is an evident instance of unconscious mental processes. Acceptance of such an account would involve a denial of consciousness, and, in that sense, therefore require that we pretend to be anaesthetised. The objection we have now identified, which, as we have said, proves the downfall of the Analytical Approach, may be referred to as 'the chicken-sexer objection', or 'CSO', for short, and for future purposes we may state it as follows:

> (CSO) Any account of perceptual experience that assimilates ordinary conscious perceptual experiences to perceptual episodes such as occur in the unusual case of chicken sexing, which are instances of unconscious mental events, must, for that reason, be rejected.

If, moreover, consideration is given to what is required in the account of ordinary perceptual experiences to avoid their assimilation to what occurs in the chicken sexing case, it seems that, from a

commonsense point of view at least, the need is for an account along the lines of the Acquaintance Analysis. Commonsense suggests that what makes the chicken sexing case odd is that, normally, when we look at two objects and believe them different in some respect as a result of looking, there is some difference in their visual appearance of which we are conscious, whereas there is no such conscious difference when chicken sexers rightly judge two chickens to be of different sex. There is no difference in content experience accompanying the difference in beliefs - that is to say, no difference in content as specified in A1. And not only this. Perhaps the strongest reason why the chicken sexing case appears odd to commonsense is that the lack of any accompanying awareness of content means that chicken sexers simply find themselves in possession of true beliefs without being able consciously to determine why the belief is true. In normal perceptual episodes, beliefs are acquired on the basis of a conscious apprehension of content, but in the chicken sexing case this is not so. But, if this account of the oddity of the chicken sexing case is correct, it follows that any account of perceptual experience which repudiates the Acquaintance Analysis, with its distinction between perceptual experience and belief acquisition, and insistence that the former provides our reasons for acquiring perceptual beliefs, will fall prey to CSO.

A commonsense appraisal of CSO thus enforces the Acquaintance Analysis, and a major concern in later Chapters will be how far this commonsense appraisal proves sustainable. Certainly, however, it provides a refutation of the Analytical Approach, as will be confirmed in the next Chapter.

# CHAPTER 4

## A refutation of the Analytical Approach

### 1. Summary of Chapter

Two accounts of perceptual experience have been identified as fundamental to the Analytical Approach, the Belief Analysis and the Adverbial Analysis, and it is first shown how the former of these succumbs to CSO. The Belief Analysis, as currently defended, is shown to claim that all we are aware of in perceptual experience is that we hold a belief about the world that we did not hold previously, and a further belief as to the manner by which it was acquired - a sensory mode, in the case of sense perception. There is no awareness of content which provides the grounds for such beliefs, contrary to the Acquaintance Analysis, and it thus emerges that despite its advantages for the defence of materialism and its apparent ability to accommodate other aspects of commonsense discourse and beliefs about perceptual experience, there is a problem which the Belief Analysis is in principle incapable of avoiding, namely, that it provides an account of ordinary perceptual experience in which our awareness is no different to that had in the chicken sexing case.

Attention then turns to the Adverbial Analysis, which seems prima facie to have an advantage over the Belief Analysis in relation to CSO in that it allows perceptual experience to be a conscious basis for belief acquisition. It differs from the Acquaintance Analysis, however, in regarding perceptual experience as involving the non-relational occurrence, sensing, rather than the apprehension of content. The problem here is of what introspectible qualities may make different adverbially described manners of sensing consciously different. There would be no advantage for the defence of materialism if the spatial qualia otherwise ascribed to content of perceptual experience were

allowed to characterise sensing, and such a move also makes the analysis of doubtful coherence. The adverbial descriptions usually offered may be viewed as non-committal as to what, if any, intrinsic quality is apprehended; but if none is, different manners of sensing may be consciously distinct only on the basis of concomitant beliefs, so sacrificing any advantage over the Belief Analysis. On the other hand, if we are to be aware of qualities intrinsic to particular manners of sensing in a sufficiently strong sense to avoid ascribing characteristics to ordinary perceptual experience that make the chicken sexing case odd, then the analysis ceases to be neutral with regard to the truth of materialism. It is thus concluded that CSO refutes the Analytical Approach as a whole, for, with the failure of the analyses of perceptual experience, the accounts of Secondary Quality concepts that are derivative of them fail also, and it further appears that the Acquaintance Analysis of perceptual experience is the only one compatible with commonsense views.

2. The Belief Analysis of perceptual experience

We begin with the first of the two accounts of perceptual experience that were identified as crucial to the Analytical Approach, the Belief Analysis. This constitutes the most radical departure there has been from the Acquaintance Analysis, for not only does it repudiate all the propositions embraced by the latter, but makes the essence of perceptual experience what the Acquaintance Analysis holdsto be merely a consequence of it, the acquisition of beliefs. According to Armstrong, with whom the Belief Analysis is particularly associated, perceptual experience is to be explained as a matter of the 'acquiring of beliefs about the environment'[1] through its action upon the percipient, such that the experience counts as 'veridical' perception insofar as we acquire true beliefs thereby, and sensory illusion insofar as we acquire false ones. Others, notably G. Pitcher, have subsequently joined him in espousing the Belief Analysis, which Armstrong himself extends to cover intra-bodily perception as well as perception of the

environment, in conformity with the view taken here of the scope of perceptual experience.

Now it might appear that the Belief Analysis, according to which perceptual experience is the experience of a certain sort of belief acquisition, is a more modest departure than it is intended to be. For, it might seem that the object is merely to deny A4 of the Acquaintance Analysis, the claim that beliefs are not constituent elements of perceptual experience but consequences of it. Then it could be proposed that the process of acquiring true or false beliefs may in fact involve the remaining Acquaintance Analysis propositions, A1, A2 and A3. But Armstrong is explicit that he wishes to give an account of perceptual experience without any involvement of a relationship between the mind and 'sensory items' that is distinct from and the basis for beliefs. This is apparent from the relevant parts of both his works where the Belief Analysis appears, A materialist theory of the mind and the earlier Perception and the physical world. In the latter, for example, he proposes that sensory illusion, the case where we fail to experience the world as it is, is purely a matter of acquiring false beliefs by means of the senses, and rejects any claims that such beliefs are acquired through 'immediate acquaintance' with an object or that 'to say otherwise is to try to talk away something that is visibly there'.[2] According to Armstrong, when we suffer sensory illusion there is 'no object at all, physical or non-physical, which we are perceiving in any sense of the word 'perceiving''[3], a denial which is clearly intended to exclude any objects of perceptual experience in such cases as are recognised by A1 of the Acquaintance Analysis. There is simply a false belief about the environment. Given the acknowledged experiential similarity of sensory illusion to veridical perception, the exclusion of the awareness of objects as distinct from beliefs in the former case is generalised to the latter, the difference being that veridical perception is marked by

the acquisition of true beliefs. As we shall see also, Armstrong seeks to give sense within his theory to the idea of perceiving an object, in terms of the idea merely of the object's causing us to hold true beliefs about it.

The experience of acquiring beliefs, true or false, that is perceptual experience on the Belief Analysis, thus involves no awareness of anything other than beliefs. All there is to this experience, it must accordingly be concluded, is the awareness, at a particular moment, that we have a certain belief about the environment that we did not have previously (or that we retain certain such beliefs previously acquired, in the case of continuing perceptual experience). This does not, however, suffice to mark a belief acquiring episode specifically as a perceptual experience, for, as thus understood, any occurrent thought would count as a perceptual experience if it was about how the world is. What, in addition, is required to produce a characteristically perceptual experience is an accompanying belief as to how the belief in question was acquired - typically a belief relating to the sensory mode by which it was acquired.[4] Thus, visual perceptual experiences are conscious episodes where we are aware, for example, that we would not have acquired the given belief if we had not had our eyes open. Another advocate of the Belief Analysis who seeks to distinguish perceptual experience in this way is Pitcher. Thus, for him, what makes a case one of seeing is not 'the sensuous visual presentation or manifold',[5] which he repudiates, but the knowledge that the particular knowledge acquired in the episode came by means of the eyes.

The main claims of the Belief Analysis may now be stated as being that:

(1) Perceptual experience is the experience of acquiring true or false beliefs about the world as a result of its action upon the percipient.

(2) What we are aware of in such episodes is, first, that we hold a belief about the world that we did not previously have, and, second, an accompanying belief regarding the manner by which the belief was occasioned, typically referring to a sensory mode.

(3) There is no awareness of content, as embraced by the Acquaintance Analysis, that provides grounds for holding these beliefs; the only content to our awareness in perceptual experience being the beliefs mentioned in (2).

Now, although the Belief Analysis as thus outlined is one that has found increasing favour in recent times,[6] the basic idea it embodies, that perceptual experience is a matter of our coming to hold beliefs, or judgements about the world, is not an original one. It is, as Pitcher recognises, a 'traditional answer' to the question of what perceptual experience consists in. The tradition concerned is that of Hegelian Idealism. In that form of Idealism, according to Hirst, it is characteristically held that 'Perceptual consciousness... is the judgement that some sensible datum characterises objective reality',[7] and he further remarks that such views are 'part of a general logical and epistemological position so far removed from the present climate of thought that it is not easy for anyone brought up in the latter to state or appreciate it'.[8] Armstrong's <u>Perception and the physical world</u>, which appeared just two years after this claim of Hirst's, can thus be said to have marked a change in the climate of thought to which he is referring, a climate that developed under the influence of Russell's ideas and in which the notion of acquaintance - repudiated by Armstrong - was prominent. This is not to cast Armstrong as an Idealist, for as a scientific realist he would reject other central

tenets of that tradition - in particular, the notion that reality is constituted by people's ideas. The scientific realist holds that there is a mind-independent reality of which science offers the best description, and what Armstrong has done is to attempt to rehabilitate an aspect of Idealist thought in support of that conviction. Having said this, the question that then arises is how exactly the Belief Analysis does serve the defence of scientific realism as expressed in materialism as defined here.

3. The advantages of the Belief Analysis for the materialist

To appreciate how the Belief Analysis contributes to the defence of materialism, it is necessary to recall the two main problems that perceptual experience was said to pose for its defence. First, there was the problem of qualia, the non-physical, spatial qualities that seem to feature in our experience of Secondary Qualities and sensations, and then the problem about the location of sensations. Certain sensations must, on the basis of our experience of them, be located where there is no corresponding physical phenomenon. The Belief Analysis allows, it seems, for both these problems to be disposed of. If perceptual experience is simply a matter of being caused to hold certain beliefs, rather than being assured by acquaintance of the truth of beliefs, such as those about qualia and the location of sensations, then there is no need to admit that there are in fact any such entities as qualia or problematically located sensations. The beliefs concerned may simply be false. Thus, when we suffer an afterimage there need be no object which actually is two-dimensional, presents colour qualia, follows our direction of gaze, and is locatable among an array of public objects, as we seem obliged to say on the basis of acquaintance. For, we may simply be caused, by the malfunction of our eyes as a result of prior exposure to bright light, to believe something is present having those qualities, a belief which is incorrect. Likewise, with phantom-limb

pains, the other most acute instance of the location objection introduced in Chapter 2, there need, on the Belief Analysis, be no bodily sensation actually located in mid-air to account for our experience, only the false belief that there is an object so located.

The experience of sensations as located where there is no corresponding physical phenomenon, then, is to be explained as a matter of false beliefs about the location of sensations. There is no need, by contrast, to hold that the belief in sensations is itself false in resolving this problem. Indeed, if sensations were totally repudiated then we would be departing from the terms of the Analytical Approach, since to say there are no sensations commits us to the abandonment of existing concepts relating to perceptual experience, rather than their analysis compatible with materialism. However, in the case of the problem of qualia, it is not clear, prima facie, that a total repudiation, contrary to the Analytical Approach, may be avoided. Qualia were said to be what seem on the basis of our experience to be the essential characteristics of Secondary Qualities, and if this is correct we cannot claim that the belief in qualia is false without having to admit that there are no such things as Secondary Qualities, a course inconsistent with the Analytical Approach.

Armstrong naturally rejects applying the Belief Analysis in this way to the problem of qualia, and instead offers the alternative analysis of Secondary Quality concepts that was mentioned at the start of the previous Chapter, according to which, for example, 'we know nothing of what redness is in its own nature'. At the time, it was claimed that this account was derivative of the Belief Analysis, and the first reason for saying so is the rejection of any role for acquaintance in explaining our concept of red. According to Armstrong,

> Red objects all have a property in common which all normal observers can detect. But we normal observers are not aware of the nature of this property...(and) what principally stands

> in the way of accepting this solution is the illusion that perception gives us a through and through knowledge of, or acquaintance with, such qualities as redness.[9]

The implication here is that the idea that the concept of red commits us to 'irreducible qualia' comes from a mistaken view about perception, namely, one in which concepts and beliefs relating to perceptual experience are based upon acquaintance - the Acquaintance Analysis, in other words. Take away acquaintance with redness and there is no more reason to say that we are presented essentially with an indefinable, unanalysable quality when confronted with red things, than to say, with Armstrong, that we know nothing of what redness is in its own nature.

There is, in addition, a second level on which Armstrong's account of Secondary Quality concepts reflects his Belief Analysis of perceptual experience, and that is through its drawing upon his account of what perceptual beliefs are.[10] In explaining perceptual beliefs, Armstrong avoids a common objection to the Belief Analysis, that there are percipients who are incapable, in the normal sense of the terms, of judging or holding beliefs. These are elevated human faculties which animals and babies lack, although they are perfectly capable of seeing things.[11] He avoids this difficulty by proposing that the beliefs acquired in perceptual experience consist in capacities for discriminatory behaviour with respect to the environment. By discriminatory behaviour, he means activity like the picking out and sorting of physical objects, and it is clear that animals and the like are just as capable of acquiring such capacities as humans. Sensory illusion would be where we acquire a readiness to respond to objects as if they had a common characteristic when, in fact, they do not have it, and veridical perception, perceiving things as they are, would be where they do have the characteristic. The parallel with the account of colour concepts is clear, for the

claim is that our talk about things being 'red', for example, is based purely on an ability to detect some quality that is common to a certain set of objects- typified by ripe tomatoes, pillar boxes and the like. In other words, the use of the term, and the concept it expresses, is purely a matter of a discriminatory capacity that we have with respect to certain objects. It is of course denied that there is any awareness of what enables that capacity to be exercised, since that would be to revert to acquaintance.

All this is reinforced by an imaginary analogy which Armstrong considers 'will serve as a model for our knowledge of redness'.[12] It might be the case, he says, that within an 'indefinitely large group of people' there are members of two distinct families, between whom there are 'subtle differences'. Observers can, however, tell members of the two families apart with a good degree of accuracy, although they 'can make no comment on, and, indeed, have no knowledge of, the way they sort out these people'.[13] They could, moreover, introduce terms to refer to the two family types, and if they did so, the situation would in Armstrong's view be just the same as that obtaining with colour concepts - there being first a discriminatory capacity with no awareness of the basis of that capacity, and then the use of terms to mark differences, whatever their intrinsic nature, that are the subject of it. It may be noted that for Smart also, we may go a long way in explaining colour concepts by referring to the 'discriminatory responses of normal colour percipients',[14] although, as we shall see, he does not go as far as Armstrong. Moreover, a similar line to Armstrong's is taken by Pitcher.[15]

The way in which the Belief Analysis may serve to overcome the problems posed by perceptual experience for the defence of materialism may now be summarised as follows:

(1) The location objection is disposed of by claiming that perceptual experiences that suggest that there are sensations

located where there is no corresponding physical phenomenon are purely instances of our being caused to hold false beliefs.

(2) The problem of qualia is disposed of (a) by arguing that the only reason for supposing their involvement in Secondary Quality concepts is the mistaken Acquaintance Analysis; and (b) by saying that ultimately those concepts are a matter of capacities for discriminatory behaviour - capacities which certain objects occasion in us, as in Armstrong's analysis of the beliefs involved in perceptual experience.

4. Does the Belief Analysis succeed? - preliminary appraisal

We saw earlier how the Acquaintance Analysis, against which the Belief Analysis is opposed, prima facie accorded well with ordinary discourse and commonsense beliefs about perceptual experiences,[16] and so, if the latter analysis is to be acceptable within the terms of the Analytical Approach, it must do at least as well. Perhaps the most obvious objection to the Belief Analysis is that beliefs, commonsense suggests, are, as the Acquaintance Analysis holds, consequent upon perceptual experience and not the essential content of that experience. Against this intuition, Armstrong asks us to consider the biological function of perception.[17] Is it not to direct our behaviour in relation to the world so as to maximise our survival prospects? If so, it would suffice if perception was merely a matter of coming to hold accurate beliefs about it, for behaviour is guided by beliefs, a connection which is most apparent when perceptual beliefs are explained as capacities or readiness for discriminatory behaviour. But this does not square the Belief Analysis with ordinary discourse, wherein there are two uses of verbs of perception, the propositional and non-propositional, and the suggestion is that the latter is fundamental. To repeat, it is only because we see things that we see that something is the case in the world. The response of advocates of the Belief Analysis has been to seek to show how the

non-propositional use of verbs of perception may be interpreted in terms of the propositional use. Armstrong, for example, proposes that the role of talk of preceiving objects is not to acknowledge the existence of acquaintance, but merely to indicate that information has been acquired about an object, through the action of that object on the percipient, without being specific as to the information acquired, which may at least in part be false.[18] Other philosophers have likewise sought to account for the two uses of verbs of perception[19] so that it does not appear that it can in itself be presented as a decisive objection to the Belief Analysis.

What, by contrast, does appear a decisive objection to this analysis is the existence of cases where perceptual experience is had but no belief is acquired. When, in general, we experience an afterimage we do not come to believe falsely that there is a strange kind of object on the wall opposite, though our experience is just as if there were such an object. How can this 'perception without belief' be reconciled with the Belief Analysis? Despite appearances, the present difficulty is not one that advocates of the Belief Analysis have found insuperable. What prevents us believing that there is really something present on the wall, in the above afterimage example, is other beliefs that we possess, to the effect that no such objects are actually present in the environment, such as the belief that no one else is able to detect them and that their presence is not confirmed by other sensory modes. Cases of perceptual experience without belief acquisition, may then be represented as mental events 'which would be described as the acquiring of belief but for the existence of contrary beliefs that we already hold'.[20] And, although an opponent of the Belief Analysis, J.R. Smythies, has called such locations 'tortured linguistic gymnastics',[21] it is clear that they constitute no radical departure from the terms of that analysis. Only a slight modification is involved to the effect that perceptual experience is either belief acquisition or what would other-

wise be belief acquisition.

A more serious difficulty for the Belief Analysis seems to arise from the argument earlier in the present discussion that we are conscious of what we believe through being aware of expressions of our beliefs, and such expressions - at least the ones we apprehend through introspection-involve imagery, notably auditory imagery.[22] Such imagery involves qualia, however; qualia resembling those of the corresponding sensory mode - the main point of difference being that they are less vivid and do not seem located in the environment. But this means that the Belief Analysis, assuming that it allows us awareness of our beliefs, merely disposes of the problems of the location of sensations and of Secondary Quality qualia at the expense of admitting the qualia attaching to imagery. The Belief Analysis hence does not conform to our earlier observation[23] that if the problems of Secondary Quality qualia may be disposed,we are similarly in a position to dispose of those that characterise imagery.

One way of preserving the Belief Analysis as a means of avoiding any problem arising from the content of perceptual experience for the defence of materialism, would be to attempt, in the light of the above difficulty, to apply that analysis to imagery also. Just as the acquaintance with Secondary Quality qualia is avoided by claiming that the content of the experiences concerned is in fact beliefs to the effect, say, that something is a certain colour, so the presence of a particular sort of mental image could be represented as something like the presence of a belief about the environment, without being such a belief. Then qualia attaching to imagery could likewise be avoided. This, indeed, is just how Armstrong explains mental images. According to him,

> They are events that resemble the acquiring of beliefs about the environment as the result of the action of that environment on the perceiver, although no belief... nor any action of the environment is involved.[24]

Unfortunately, the present proposal fails since the initial problem will simply recur in a new guise. If we are to be aware of something resembling a belief then, on the analogy of the awareness of beliefs, we need to be aware of entities resembling the imagery that the latter awareness involves, and hence items resembling the qualia that characterise such imagery, so leaving more inherently non-physical entities to dispose of. Any further attempts to apply the Belief Analysis will, it is apparent, simply engender a vicious regress.

There remain two options for the advocate of the Belief Analysis. The first is to deny that we can be introspectively conscious of our beliefs, which is surely an insupportable course, and certainly at variance with commonsense. And the second is to deny that this awareness presupposes the awareness of imagery. A third possibility would be to try to deal with the problem of the qualia of imagery other than through an application of the Belief Analysis, but this would be to abandon the idea of this analysis serving as the means by which the problems posed by perceptual experience for the defence of materialism may be avoided. Armstrong in fact takes the second option, and so avoids having to confront the present problem in his treatment of the Belief Analysis. Of sensations and mental images he says that:

> ... it may perhaps be granted that they are the most obtrusive sort of inner item, but it is far from clear that we are not sometimes aware of thoughts and intentions, for example, without accompanying imagery and sensations.[25]

The involvement of imagery in the awareness of beliefs and the like is, then, a matter of controversy, but, rather than attempting to vindicate our previously stated position as a means of refuting the Belief Analysis, we propose to set aside this issue, since there is a criticism of the Belief Analysis, and the Analytical Approach in general, which stands whatever the verdict on the present criticism. As previously anticipated, the criticism concerned is the Chicken

Sexer Objection(CSO), and it is to this that we turn in the next Section.

5. The Belief Analysis and CSO

In the previous Chapter we introduced CSO as a sufficient reason for rejecting any account of perceptual experience that was susceptible to it. What made the activity of chicken sexing odd was that people were able, by the use of their eyes, to tell male and female newly-hatched chickens apart, when consciously the two sorts of chicken looked just the same. The visual properties distinguishing them, which are presumably subtle differences, must accordingly be discerned unconsciously, making the case an example of unconscious mental events. What chicken sexers are conscious of when they see a newly hatched chicken is that they find themselves with a judgement about its sex, and they also know that the judgement arose through the operation of their eyes, since they know that if they had not had their eyes open, no such judgement would have been made. But it is now obvious that the awareness had in the activity of chicken sexing is just what the Belief Analysis claims occurs in the ordinary case of perceptual experience - namely, the awareness of holding a belief about the world that we did not previously have, and of an accompanying belief that the latter belief was acquired by sensory means. The claim is, in other words, that, introspectively, ordinary perceptual experiences are just like the peculiar perceptual episode involved in chicken sexing. By the terms of CSO, this assimilation of ordinary perceptual experiences to an unconscious mental event suffices for the rejection of the Belief Analysis.

Further confirmation of the assimilation of ordinary conscious perceptual experiences to what Armstrong admits himself to be an unconscious mental event, that involved in chicken sexing, is provided by Armstrong's 'two families' model for Secondary Quality concepts. Colours are surely things that we consciously discern if any are.

But the analogy he proposes involves the idea of people being able to distinguish members of two families between which there are subtle differences of which they have no conscious knowledge. As such, while it may be doubted that the analogy is a good one for Secondary Qualities, it clearly corresponds precisely to what occurs in the chicken sexing case. And, of course, the account of perceptual experience implied by Armstrong's account of the beliefs involved in perceptual experiences, which is in terms of capacities for discriminatory behaviour, generalises the two families analogy to perceptual experience as a whole, and not just that involved in Secondary Quality concepts.

That Armstrong offered such a hostage to fortune in mentioning the chicken sexing case was in fact spotted previously by W. Kneale in reviewing A materialist theory of the mind. He rightly points out that 'there is an absurdity in supposing that all perceptual discrimination is the same kind as a case which interests us because of its oddity'.[26] What, therefore, can Armstrong, or any advocate of the Belief Analysis, say to this? All it seems they can do, if they are to retain their position, is to take a different view of the chicken sexing case and any one like it, and say that it is not in fact an oddity or an instance of an unconscious mental event quite different from ordinary perceptual experience, but quite typical. To argue in this way is, however, incompatible with the Analytical Approach. Ordinary discourse and commonsense regard the chicken sexing case an exceptional and peculiar perceptual episode, as indeed does Armstrong himself, and hence it must in any account of perceptual experience that claims to accommodate ordinary discourse and commonsense views about that experience, be distinguished from the ordinary. The Analytical Approach requires that this distinction be preserved just as much as the two uses of verbs of perception - propositional and non-propositional - and the notion of perception without belief. But it is one that the Belief Analysis is in principle incapable of accommodating, for what would be required is a further

introspectible element in perceptual experience beside the two sorts of belief that are the essence of that analysis - the belief about the world and the belief about the mode of acquisition. If a non-belief element were added, that would be to abandon the Belief Analysis as a sufficient account of perceptual experience. And, on the other hand, it is far from clear that the case of chicken sexing and ordinary perceptual experiences could be distinguished by additional beliefs present in the one case and absent in the other. What could they be? Perhaps it might be said that in the ordinary case there is an additional, false, belief that there is more involved in that case than the chicken sexing one - namely, acquaintance or something like it. This suggestion is, however, inadmissible within the terms of the Analytical Approach because it regards a distinction that commonsense would draw within perceptual experience to be a false one, thereby implying that the existing, commonsense, concept of perceptual experience should be revised, which is the stance of the Revisionary Approach to defending materialism not the Analytical one.[27]

In any event, the oddity of the chicken sexing case has a strong claim to be an indisputable fact about perceptual experience. The most plausible explanation of why it should seem odd is that there really is a difference between the perceptual episode involved in chicken sexing and ordinary perceptual experiences. For this reason also, then, the Belief Analysis should be rejected. The question thus is whether any account of perceptual experience within the Analytical Approach is capable of avoiding CSO, or whether, as it appeared in the previous Chapter, only the Acquaintance Analysis is able to do so, an analysis incompatible with materialism. Attention must accordingly now turn to whether the second of the two accounts of perceptual experience that fall within the Analytical Approach fares any better than the Belief Analysis, namely, the Adverbial Analysis.

6. The Adverbial Analysis and the defence of materialism

The first thing to be said about the Adverbial Analysis is that it is not as radical a departure from the Acquaintance Analysis as the Belief one is. For, it allows the beliefs acquired in perceptual episodes to remain consequent upon perceptual experience and hence grounded by it, as the Acquaintance Analysis insists, rather than identifying the two, as the Belief Analysis does. The innovation which essentially distinguishes the Adverbial Analysis from the acquaintance one is in its denial that perceptual experience as a conscious episode is act-object in character. Perceptual experience is not a matter of consciously apprehending content, but a non-relational mode of consciousness usually referred to as 'sensing', a term which was previously encountered as Price's term for acquaintance, but which here has a different meaning. It is this departure from the Acquaintance Analysis which is what makes the Adverbial Analysis seem of assistance in the defence of materialism; for, the problems for its defence arise, we have argued, from the content apprehended in perceptual experience, and those problems will therefore disappear if that experience may be analysed without reference to the apprehension of content. To proceed further it is, however, necessary to introduce the Adverbial Analysis in greater detail.

First, something may be said about its origins. In this regard, much of the recent popularity of the Adverbial Analysis, including the aforementioned use in defence of materialism, can be attributed to R.M. Chisholm's advocacy of it in his Perceiving: a philosophical study , the purpose of which was to explain perception in terms that avoid unwanted ontological and epistemological commitments that have been held to result from an account based on the Acquaintance Analysis. However, like the Belief Analysis, it is a theory that has in essentials existed prior to its most influential recent presentation. Hirst[28]

points out that C.D. Broad takes the adverbial view for at least some sorts of perceptual experience, and similarly A.J. Ayer, in Language, truth and logic, says 'we do not accept the realist analysis of our sensations in terms of subject, act and object... Accordingly, we define a sense-content not as the object, but as part of a sense experience'.[29]

How, then, should perceptual experience be characterised so as to make clear that it does not consist in a relation of awareness to an object? The answer typical of the Adverbial Analysis is that where, for example, on the Acquaintance Analysis, mention would be made of being aware of the quale of red, reference is instead made to 'sensing redly'. What would be the awareness of a round, red afterimage is instead described as 'sensing red-circlely'. It is now clear how the Adverbial Analysis is adverbial. For, it serves to distinguish different sorts of perceptual experience not by reference to different objects or qualities of which awareness is had, but by different adverbial descriptions - often artificial ones - of the manner of sensing that is deemed to be taking place. One may, moreover, sense redly without the implication that anything red is being perceived, and, similarly, sense red-circlely without anything red or circular being present.

The intention is not to deny that we perceive things, or that perception itself involves a relation of consciousness to an object, but merely to deny that perceptual experience - what occurs both when we perceive and seem to perceive something - involves such a relation. The occurrence of a certain manner of sensing, according to Chisholm, counts as seeing an object when an object acts upon our eyes through the propagation of light from its surface, and thereby causes us to sense in a manner appropriate to characteristics the object actually has.[30] For instance, we see red if a red object in the environment acts on our eyes causing us to sense redly. We do not, on these terms,

see afterimages, for the perceptual experience here is not the result of the action of an object in the environment, but of a causal chain beginning in the eye itself due to the disordering of the retina. All that occurs here is the adverbially described sensing process, with no object of awareness. Thus there is, on the Adverbial Analysis, no problem for the defence of materialism about the location of afterimages. No such objects are experienced. Less extreme cases of sensory illusion, as with sensations mislocated within the body, could be accommodated by saying that although an object is perceived, our sensing with respect to the object does not correspond exactly to the way it is.

What, however, of Secondary Quality concepts? If, as indicated in the previous paragraph, it is possible to see red through sensing redly under the right circumstances, then there is such a quality as red, and so, presumably, a quale of red also. However, the notion of a quale of red is bound up with the idea that perceptual experience entails acquaintance with content, and the Adverbial Analysis denies this. Introspectively, our experience when we sense redly and in fact see something red is just the same as when we sense redly and do not see anything red - it is the causal conditions that make a case one of seeing a quality. There is, moreover, no spatially extended quale attaching to the activity of sensing redly, for sensing is not a spatial object but a mode of consciousness, nor is it, of course, the apprehension of objects in itself. Thus, since the idea that there are qualia comes from reflection upon perceptual experience, the conscious element in episodes when we perceive things, as distinct from the causal conditions that constitute an episode one of perceiving, and the Adverbial Analysis is now shown to leave no room for qualia in perceptual experience, there is no basis within the terms of that Analysis for the admission of qualia. This, at least, is the conclusion that follows from the construal of the Adverbial Analysis that must be adopted if it is to serve in the defence

of materialism. (An alternative one, that is both of no use for this purpose and of doubtful coherence, will be encountered later). We are thus left with an account of Secondary Quality concepts where there is, first, a characteristic manner of sensing that certain environmental objects occasion in us, but which may also occur where no object is perceived. That manner of sensing, further, enables us to discriminate those objects and apply Secondary Quality terms to them. Such an account is in fact offered by Smart, who recognises that it is insufficient to try to explain those concepts purely in terms of capacities for discriminatory behaviour, and adds reference to 'inner experiences' conceived in adverbial terms.[31]

The main points distinguishing the Adverbial Analysis and commending it to the defender of materialism may now be summarised. These are:

(1) Like the Acquaintance Analysis, the Adverbial Analysis retains the idea that perceptual experience is distinct from and the ground for beliefs acquired in perceptual episodes; but

(2) It does not characterise perceptual experience as the conscious apprehension of content. Instead, particular such experiences are distinguished as non-relational modes of consciousness, sensing, which are adverbially described.

(3) This has the advantage that there is no need to admit objects having just the characteristics that thwart materialism: the location objection may be avoided by treating the cases concerned as ones where sensing does not correspond to reality; and qualia are avoided because sensing, the conscious element in perceptual episodes, is not a spatial object capable of bearing qualia, nor is it the apprehension of such objects.

Against the advantages just mentioned it may, however, be asked whether the Adverbial Analysis is any better placed as an account of perceptual experience than the recently rejected Belief Analysis. In

particular, how does it fare when confronted with CSO, which proved the downfall of the Belief Analysis? It is to this that we now turn.

7. The Adverbial Analysis and CSO

On the face of it, the Adverbial Analysis does succeed where the Belief Analysis failed. For, it might be suggested that rather than it being the lack of an awareness of content that makes the chicken sexing case odd, as the Acquaintance Analysis would have it, what in fact is missing is a characteristic mode of sensing accompanying the belief as to the chicken's sex. There is, in other words, no sensing male (or female) chicken-ly. By contrast, the Belief Analysis is, as we saw, in principle incapable of distinguishing the chicken sexing case from ordinary perceptual experiences. The Adverbial Analysis seems therefore to provide reason for claiming that CSO does not have the Acquaintance Analysis as a consequence,[32] since it provides grounds for rejecting the contention that the only account of perceptual experience that avoids assimilating ordinary perceptual experiences to the chicken sexing case is the Acquaintance Analysis.

Unfortunately, however, closer examination of the Adverbial Analysis raises doubts over its ability to avoid CSO. The central problem concerns the understanding of the notion of sensing, and the different manners in which it may occur. To appreciate the difficulty, it needs, first, to be recalled that the reason reference to sensing redly, rather than the awareness of red, in describing a particular perceptual experience, avoids qualia, is that a manner of sensing is not something to which spatial qualities like the quale of red may be ascribed. Smart concurs with this line of argument when he says of afterimages:

> I am not arguing that the afterimage is a brain process, but that the experience of having an afterimage is a brain process... and this experience is not a yellowy-orange something...(and adds that) there is, in a sense, no such thing as an after-image, though there is the experience of having an afterimage.[33]

By 'the experience of having an afterimage' he is referring to an occurrence essentially the same as sensing, for it does not involve the apprehension of an object - the sense in which there is no such thing as an afterimage but only the experience of having one, is that there is no such object actually in existence, though we do of course talk as if there is. But more important is the point that the experiencing, or sensing, mentioned here does not have the spatial qualities applied to the non-existent object. This, as we said, is how sensing must be viewed in defending materialism, for the admission of qualia is no more acceptable as characterising the latter than objects.

Having said this, it may be noted that the austere conception of sensing just presented - austere in that it excludes spatial qualities attaching to that activity - does not appear to have been adopted by all its advocates. Ayer, as we saw, admits sense contents, but intends them to be not the objects of sense experience, that to which consciousness is related, but integral elements in the state of consciousness. For some, in effect, the Adverbial Analysis seems to have signified simply the idea that the content of a perceptual experience and the experience itself are so intimately connected - especially if it is held that the contents are esse in percipi, existing only insofar as they feature in perceptual experience - that they cannot be distinguished as an act-object relation would imply. Hirst, for one, would seem to incline to this view, for at no time does he recognise any detrimental consequences for the admission of sensory qualities like qualia arising from the Adverbial Analysis. On whether to take an act-object or adverbial view of perceptual experience, he says merely that 'ones attitude to this controversy must depend on how the experience seems to oneself'.[34]

But at least two reasons seem to counsel against so indulgent a view of the matter. First, if sensing is granted the spatial qualities

that would otherwise be ascribed to the object apprehended in perceptual experience then that would appear sufficient to regard sensing itself as a spatial particular. But, while it could presumably be a process that takes place in space and time, it makes doubtful sense to suppose that sensing is a spatial particular, something on a par with afterimages and other perceptual objects. Objects and occurrences are distinct categories of existent both from the point of view of commonsense, and indeed from that of philosophical reflection, so it would seem that the indulgent view of sensing is both in violation of the terms of the Analytical Approach, with its emphasis on accommodating commonsense, and indeed thoroughly incoherent. The second reason is that, if sensing is granted spatial characteristics, then qualia have at least as much right as anything else, in the absence of further argument, to be included among those ascribable to it, which would, of course, preclude the Adverbial Analysis from being of any use to the defence of materialism.

Indeed, it may be argued that any involvement of intrinsic qualities in explaining how the notion of sensing, and the various manners in which it may occur, is to be understood will create problems within the terms of the Analytical Approach. For, the basic premise of that approach is that an account may be given of perceptual experience that neither entails nor excludes the truth of materialism, and since materialism as understood here is essentially a theory about the intrinsic natures of things in the world, any reference to particular intrinsic qualities in specifying sensing may, on the contrary, be expected to involve items that either are or are not embraced by materialism. Confirmation of this is provided by the fact that materialism as understood here would wish to claim that insofar as there are such things as different manners of sensing, they are in their intrinsic nature nothing more than various patterns of brain cell firing, occurrences of which the physical sciences as at present constituted offer a clear and decided view. The problem may thus not be evaded by claiming that sensing is being held to consist, in its

intrinsic nature, of phenomena with respect to which sufficiency of account is not recognised within the physical sciences to have been achieved. The latter qualification to DM[35] is of no avail here.

The Adverbial Analysis is thus required to explain how the notion of sensing is to be understood without any specific intrinsic nature being ascribed to it, while at the same time preserving the claim that the analysis avoids CSO. And the task now is to examine whether this balance can be struck. We may begin with Smart's account of what, for example, the description 'the experience of having an afterimage' amounts to, a description which we have concluded specifies a manner of sensing. His account of such descriptions has, of course, as its prime objective showing that they are topic-neutral in relation to ontological questions.

As is now familiar, according to Smart, talk of 'the experience of having an afterimage' signifies something like the claim that there is something going on which is like what happens when we see a certain environmental object, such as an orange. This suggests a view of sensing according to which there are two introspectively available components: first, an awareness of something going on, and second, an awareness of a likeness between what is occurring and what occurs under certain conditions. Some sort of intrinsic similarity must be intended here since it is the occurrences taken in themselves that are being compared. Crucial to the topic-neutrality of this account is, moreover, first the fact that merely being aware of something going on does not imply that we are aware of something having any particular intrinsic nature; and, second, the denial that we have any awareness of the precise respect of likeness connecting the two occurrences. The latter is important since otherwise mention would have to be made of specific intrinsic qualities constituting the respect of likeness, a course that could contradict materialism and will, it seems, violate the terms of the Analytical Approach.

That there is no awareness of respect of likeness, according to Smart's account, is confirmed by there being no reference to one in the topic-neutral descriptions offered as explaining what talk of such things as 'the experience of having an afterimage' signifies. Further support for this construal of Smart is provided by his arguing in favour of his account that 'If we think cybernetically about the nervous system we can envisage it as able to respond to certain likenesses of its internal processes without being able to do more'.[36] The ability consciously to detect a particular manner of sensing is, in other words, proposed to be an instance of just such a limited capacity on the part of the nervous system - it enables us to detect the likeness only, not the respect of likeness.

This, then, is how Smart's topic-neutral description approach enables sensing to be understood without implying the existence of any qualities that may conflict with materialism. There is, however, a different construal of descriptions of sensing that is suggested by Chisholm's understanding of the adverbial descriptions which, as we have seen, he offers to characterise particular manners of sensing, as exemplified by talk of 'sensing redly' or 'sensing greenly'. An obvious way, of understanding these expressions would accord them similar meaning to Smart's topic-neutral descriptions. Thus 'sensing redly', say, might be taken to mean 'sensing in a red-like manner', or, in other words, 'sensing as we would if we saw something red', which closely resembles Smart's talk of things like 'something going on which is like what happens when we see an orange'. However, Chisholm is quite explicit that talk of 'sensing redly' and the like, for him, constitutes a non-comparative use of words.[37] Its meaning does not, that is to say, depend on any comparison to what occurs when we see something red, and so is, on his view, quite different to Smart's topic-neutral descriptions. But, if it is granted that such locutions may be non-comparative, problems seem immediately to follow,

for it is then the case that such descriptions are characterising occurrences in themselves; that is, offering intrinsic characterisations rather than the extrinsic ones that comparative uses of words, such as Smart's topic-neutral descriptions, provide. The problem is, as we have recently noted, that the Analytical Approach needs to avoid specific commitments as to intrinsic qualities in its account of perceptual experience in order to preserve the assurance of ontological neutrality with respect to materialism.

Perhaps, however, it is premature to reject a non-comparative construal of descriptions of sensing on this basis. For, only if a non-comparative meaning is given which involves specific commitments as to the intrinsic nature of the entities to which the descriptions apply, will there be the basis for conflict with materialism and the terms of the Analytical Approach. And an alternative does seem possible: 'sensing redly' and the like may serve simply to label a manner of experiencing, a certain 'inner process' that we are able to detect, irrespective of what the precise nature of that occurrence is. A non-comparative construal of descriptions of sensing may thus be just as topic-neutral as a comparative one. In each case, though, the neutrality must not be at the expense of susceptibility to CSO, and there are unfortunately reasons to think that neither enable the necessary balance to be struck.

To see how this is so, we may return to Smart's account of what talk of sensing means. This, as we saw, grants us an awareness of 'something going on', if we introspect a certain manner of sensing, but no awareness of any particular quality intrinsic to that occurrence. We are also aware of a likeness between that occurrence, in its intrinsic nature, and what occurs under certain statable conditions, but not of the respect of likeness. However, it may be objected that if we are not deemed to be aware of any particular

quality or qualities intrinsic to the occurrence then we are not aware of the occurrence as such - the occurrence itself has made no conscious impression on us. Similarly, it could be claimed that unless we are aware of a common quality that constitutes the intrinsic likeness between the compared occurrences, we are not aware of such a likeness. But if such awarenesses are excluded, all there can be as a conscious basis for descriptions of sensing such as Smart offers is the awareness of the belief that something is going on that is like some other occurrence. On this line of argument, then, the Adverbial Analysis reduces to the Belief Analysis, which we have already rejected for its susceptibility to CSO. Matters would appear no better if talk of sensing in a particular manner provides merely a non-comparative label for a sort of occurrence that we are introspectively aware of. For, even if no specific characterisation of the occurrence is thus offered, there must still be an awareness of a particular intrinsic quality or qualities for us to be aware of the occurrence as such, and this, of course, leads to a loss of ontological neutrality. If, on the other hand, it is accepted that we are not, after all, aware of the occurrence, then again the application of the non-comparative term can only be through the awareness of a belief.

It appears, then, that the received accounts of what is meant by talk of sensing are only able to secure ontological neutrality at the expense of reducing the Adverbial Analysis to a form of Belief Analysis, an account of perceptual experience that falls through succumbing to CSO. But perhaps it is premature to reject the Adverbial Analysis on this basis, for it may be possible to challenge the idea that there can be no awareness of particular intrinsic qualities without sacrificing ontological neutrality. If such a challenge may be made then the argument of the previous paragraph no longer applies. What needs, for this purpose, to be

rejected is the tacit assumption in the foregoing that an awareness of particular intrinsic qualities may only be granted if the awareness is such that we know what those qualities actually are. Thus it could be proposed that though we are indeed able to be introspectively aware of certain intrinsic qualities when the various manners of sensing occur, so making them seem consciously different to each other, and different instances of a certain manner of sensing consciously alike, we are not aware of those qualities to an extent that implies their possessing a particular ontological status. We are not, for example, aware of them to an extent that implies that they are patterns of brain cell firing rather than patterns of activity in a Cartesian mind. This limited awareness, in addition to preserving the ontological neutrality of the Adverbial Analysis, would also vindicate the alternative accounts of descriptions relating to sensing in their failure to specify just what the occurrences to which they relate are in their intrinsic nature.

Unfortunately, there is reason to think that this representation of the introspective awareness of qualities intrinsic to different manners of sensing fails sufficiently to distinguish ordinary perceptual experiences from what occurs in the chicken sexing case, so that the absence of sensing in the latter case adequately explains its oddity. For, it was argued earlier that, from the commonsense point of view, perhaps the fundamental reason why the chicken sexing case seems odd is that in normal perceptual episodes we are able consciously to determine why it is that a certain perceptual belief should be regarded as true; we are, in other words, able to determine what actually makes it true.[38] This ability is clearly absent in the chicken sexing case, but on the present account of the awareness of qualities intrinsic to manners of sensing, it is absent in ordinary perceptual experiences also, so they continue, in a major respect, to be assimilated to the chicken sexing case. For, suppose we believe

that we are sensing redly, say. Then, on the present view, the introspectible basis for that perceptual belief, will consist in our being aware of some intrinsic quality that distinguishes that manner of sensing; but this awareness does not enable us to determine what actually makes it the case that we are sensing in that manner, for all manner of occurrences might be what in fact makes this the case, be they patterns of brain activity or proceedings in a Cartesian mind. Thus, the criticism of susceptibility to CSO remains, and may only be avoided by conceding a degree of awareness of qualities intrinsic to manners of sensing which would result in loss of ontological neutrality.

With the latter conclusion, it would further appear that the Adverbial Analysis must be pronounced a failure within the terms of the Analytical Approach. Like the Belief Analysis, it purchases neutrality for perceptual experience in relation to the ontological commitments of materialism only at the expense of assimilating ordinary perceptual experience to what occurs in the chicken sexing case. For we have found that:

(1) To admit the awareness of particular qualities intrinsic to sensing was, it seemed, to abandon the ontological neutrality that the Analytical Approach seeks to achieve in its accounts of perceptual experience.

(2) But to deny any such awareness, as seemed the case with Smart, is to deny any awareness of sensing as such, leaving the only basis for reports of perceptual experience the presence of beliefs; which reduces the Adverbial Analysis to the Belief Analysis, an analysis already refuted by its susceptibility to CSO.

(3) The option of admitting the awareness particular qualities intrinsic to sensing but not to the extent of knowing what they actually are, as a means of preserving ontological neutrality,

contrary to (1), failed since commonsense distinguishes ordinary perceptual experiences from the chicken sexing case precisely in terms of the knowledge denied here.

Since no further basis appears to be available by which the Adverbial Analysis may preserve ontological neutrality and avoid CSO, we are entitled to draw the above conclusion, that the Adverbial Analysis fails.

8. Other problems about the Adverbial Analysis

We have now shown how the Adverbial Analysis succumbs to our generic criticism of the Analytical Approach, which likewise means that accounts of Secondary Quality concepts which, like Smart's, draw essentially upon it must also be rejected. Before leaving the analysis, however, two other criticisms may be mentioned. The first of these is that, according to commonsense, we consciously acquire beliefs about the environment by directly experiencing it, but the Adverbial Analysis evidently fails to preserve this intuition. For, the conscious basis of any given perceptual belief in the Adverbial Analysis is sensing, and this is never in itself a relation of consciousness to the environment, since it is something non-relational, a conscious state of the percipient. Moreover, whether the occurrence of sensing does count also as the perception of the environment depends, as we have seen, first, on whether an environmental object causes, in the required way, sensing to occur, and, second, on whether the manner of sensing occasioned corresponds to features that the object actually has. Thus, to repeat a previous example, sensing redly counts as seeing something red if that manner of sensing is caused by a red object in the environment. We perceive the environment, in effect, when our sensing accurately represents it. All this, however, suggests that the Adverbial Analysis amounts to a version of the Representative Theory of Perception, but one which differs from the usual type in not proposing private objects as what we directly perceive. In the latter case it is arrangements of

private objects that represent objects in the environment of which we have no direct experience, while in the Adverbial Analysis it is manners of sensing that represent such objects in our experience.

The second problem for the Adverbial Analysis is that it has been found highly questionable whether adverbial descriptions of perceptual experience may be substituted for ones referring to the experience of objects. Thus, suppose two afterimages are experienced simultaneously, one of them red and round, and the other green and square. Then the adverbial description would be that we are sensing redly and roundly, and greenly and squarely. However, that adverbial description would fit both the experience of a red and round, and a green and square afterimage, and that of a red and square, and a green and round one. In other words, there are existing distinctions within perceptual experience that adverbial descriptions are incapable of accommodating. Attempts to overcome this difficulty by amending the adverbial terminology have been considered elsewhere and found to be incapable of overcoming it.[39] Indeed, it could be said that the problem for the Adverbial Analysis here is similar to that encountered in the doctrine of phenomenalism, where the attempt is made to translate references to physical objects into statements about sense data, the new terminology proving insufficient due to the inability to complete the translation.

The reason for mentioning these objections is that we shall subsequently conclude that the commonsense view of what makes the chicken sexing case odd, and which suffices to refute the Analytical Approach is not sustainable in its entirety. This conclusion could then be suggested to allow the Adverbial Analysis to be reinstated, this time outside the confines of the Analytical Approach, but the above objections will be argued to retain their force, and so prevent its rehabilitation. Instead, an act-object account of perceptual

experience will be presented.

9. The Analytical Approach must be rejected

The anticipated conclusion concerning the Analytical Approach has now been established: namely, that defences of materialism that have sought to show that ordinary commonsense discourse and concepts relating to perceptual experience leave room for the truth of materialism fail. One reason in particular has been emphasised as sufficient for reaching this conclusion - the commonsense insistence that perceptual episodes such as occur in chicken sexing be distinguished from ordinary perceptual experience. It further requires that the distinction be drawn in a way which no instance of the Analytical Approach has proved capable of doing. The Adverbial Analysis was more promising than the Belief Analysis, but ultimately foundered on the commonsense insistence that in ordinary perceptual experience, we are able consciously to determine what actually makes the beliefs that we acquire in those circumstances true. The latter is something which was argued in Chapter 3 to commit us to the Acquaintance Analysis, and thereby to the recognition of qualia, for to be committed to the Acquaintance Analysis is, we found, to be committed to qualia. The defence of materialism, which requires the denial of qualia, will, it thus seems, require that we go against commonsense and advocate the revision of ordinary beliefs about perceptual experience. This is the position taken by the Revisionary Approach, to which we turn in the next Chapter.

# CHAPTER 5

## The Revisionary Approach: an interpretation of Eliminative Materialism

### 1. Summary of Chapter

Attention proceeds now to Eliminative Materialism, the defence of materialism according to which existing concepts relating to perceptual experience may be revised so as to avoid the admission of entities which materialism cannot recognise. It is first explained how 'EM', as the defence is referred to, may claim to avoid CSO, unlike the Analytical Approach, and then attention is given to the way EM is usually stated, which commits it to a repudiation of things like sensations. The main argument of the present Chapter is that construing it in this way is not the most defensible course. Particularly unacceptable is a version of EM known as 'strong eliminative materialism', which says not only that there are no sensations, but that reports of 'sensations' are in fact reports of nothing whatever. This, it is argued, succumbs to CSO just as much as does the Analytical Approach. It is then noted that EM typically recognises, and has no reason to deny, entities that play just the causal role that is ascribed to sensations, but then such causal conditions are widely held to govern the application of sensation terms in common discourse, a function which sensation qualia may not, it seems, play. A distinction is accordingly drawn between elements in our existing sensation concepts that do and do not determine the application of the terms concerned, and it is argued that EM requires revision only in the latter category. On this basis, it is argued that EM can claim that there are sensations but that they are not characterised by qualia or located so as to thwart materialism. This proposal is then extended to Secondary Quality concepts, where due regard is paid to an earlier claim that qualia seem on the basis of our experience to be the essence of these qualities. We are, finally, able to conclude that EM, conceived

in these terms, is, after all, no more radical as a defence of materialism then the Analytical Approach.

2. Eliminative Materialism - the Revisionary Approach to defending materialism

The preceding Chapter suggested that the Analytical Approach to the defence of materialism, according to which it may be shown that the ordinary concepts we apply to perceptual experience are compatible with the truth of materialism, must be rejected by virtue of CSO. If they do anything, those concepts are committed to distinguishing ordinary conscious perceptual experiences from what takes place in the chicken sexing case and any ones like it, and to drawing this distinction in such a way that the involvement of qualia inevitably follows. Existing concepts relating to perceptual experience cannot, it thus seems, be analysed free of a commitment to non-physical items, items that cannot be accommodated within the account of the intrinsic structure of the world provided by the physical sciences. But if this is so, why not simply amend or replace those concepts? That is, why not adopt the Revisionary Approach to the defence of materialism? Philosophical defences of materialism that have taken this course have been referred to as 'Eliminative Materialism', since they involve defending materialism by doing away with certain elements of our existing conceptual scheme, or items - non-physical ones - from our ontology, and it is to this that we now turn.

In advocating the Revisionary Approach, it should be recalled that Armstrong regards it a 'desperate'[1] state of affairs to be obliged to defend materialism in these terms, to be avoided if at all possible. But then Armstrong's aversion to the Revisionary Approach is a result of his viewing it in extreme terms, as a matter of abandoning concepts relating to mental phenomena and the like altogether. As we shall see, however, it does not appear necessary to construe it in this way, and

the positions of its leading exponents are somewhat equivocal on the matter despite first indications that mental phenomena are being totally repudiated. Also, it could be said that the Analytical Approach which Armstrong advocates itself produces a pretty desperate situation by requiring us to accept the assimilation of conscious to unconscious perceptual episodes. If, therefore, Eliminative Materialism, or 'EM', as we may call it for short, avoids this assimilation, and does not entail a total repudiation of mental phenomena, then there will be much to commend it as a defence of materialism. Let us take these matters in turn.

3. EM and CSO

In common with the Analytical Approach, EM as a defence of materialism requires the denial that there are any such things as sensations located where there is no corresponding physical phenomenon to be found, and likewise the denial of sensation and Secondary Quality qualia. Unlike the Analytical Approach, however, it does not exclude them by claiming that our existing concepts relating to perceptual experience do not imply any such things - it accepts that they do, but holds that insofar as they do, our existing concepts embody false beliefs about the world. The avoidance of recalcitrant sensations and qualia is, moreover, not achieved by denying that there is an awareness of content - spatial objects or qualities thereof - in perceptual experience, as was the case with the Analytical Approach. Rather, such awareness may be admitted in EM, but the claim would be that some of the beliefs we hold about the content that features in our awareness are false. Thus, the conscious content when we report 'sensations of pain' is typically claimed in EM not to be an inherently non-physical object, characterised by a certain quale, and possibly located where no physical phenomenon of any relevant sort is to be found, but rather the firing of C-fibres, as specified by the physical sciences. Similarly, in the case of colours it may be proposed that the content experienced, which is falsely

believed to be an intrinsically indefinable quale, is really a certain wavelength composition of electromagnetic radiation.

Now, with this ability to admit the awareness of content, EM is able to distinguish ordinary conscious perceptual experiences from what occurs in the chicken sexing case by claiming this awareness is absent in the latter case. However, in that it claims we hold false beliefs about that content in the case of sensations and Secondary Qualities, it conflicts with the commonsense conviction that in ordinary perceptual experiences, in contrast to the chicken sexing case, our experience enables us consciously to determine what makes a given perceptual belief true. Reflection on our experience of colours, to take a particular example of ordinary perceptual experience, suggests that it is true that there are qualia; that, in other words, is what we are able consciously to determine to be the case. But EM wishes to claim that the belief in qualia is false. EM thus requires that the present commonsense conviction about what distinguishes ordinary perceptual experiences from the chicken sexing case - one which told crucially against the Adverbial Analysis within the terms of the Analytical Approach, be rejected. The ability of EM to avoid CSO is therefore not within the terms of commonsense appraisal of the oddity of cases like the chicken sexing one, but then commonsense appraisal is not the constraint on the Revisionary Approach that it is on the Analytical one, for the Revisionary Approach exemplified by EM seeks to challenge existing commonsense beliefs. It need not, however, challenge the fact that what occurs in the chicken sexing case is markedly different to ordinary conscious perceptual episodes. Were it obliged to do so, then sufficient reason will have been provided for its rejection, but, as indicated above, there seems to be no such obligation. With this, we may turn to the second issue that we raised at the end of the previous Section, whether EM is necessarily committed to a total repudiation of mental phenomena (and likewise Secondary Qualities), a concern which will require more lengthy consideration.

4. EM and the repudiation of mental phenomena

It was mentioned that leading exponents of EM do give the impression of totally repudiating mental phenomena like sensations. Confirmation of this is provided by the first commonly recognised exponent of this approach, W.V. Quine, according to whom, to adopt EM 'is not to deny that we sense or even that we are conscious: it is merely to try to describe these facts without assuming entities of a mental kind'.[2] This quotation shows two things. The first, of more immediate relevance to the concerns of the previous Section, is that in expounding EM, Quine wishes to avoid the sort of denial of consciousness that the Analytical Approach finds itself committed to. Second, the aim is indeed, as Quine in fact says in the passage from which this quotation is taken, 'to repudiate mental entities'.[3] The same idea is found in a later exponent of EM, R. Rorty.[4] Rorty develops an analogy for the elmination of sensations from our ontology according to which we may come to say there are no such things as sensations just as we have - at least on the whole - repudiated the existence of demons. In the past, demons were thought to play a causal role in the world, being held responsible for the occurrence of diseases, and were also believed to feature in perceptual experiences. Now, however, it is held that diseases are caused by things like viruses and germs, not demons, and perceptual experiences in which demons were thought to feature are deemed cases of hallucination. Rorty then points out that pains, like demons of old, have a recognised causal role and are believed to feature as contents of perceptual experience, but,

> The demon case makes clear that the discovery of a new way of explaining the phenomena previously explained by a certain sort of entity, combined with a new account of what is being reported by observation statements about that sort of entity, may give good reason for saying that there are no entities of that sort.[5]

Thus, since it is reasonable to suppose that the causal role ascribed to pains may be ascribed to phenomena embraced by neuro-physiology - namely, firing C-fibres, and that such occurrences may be represented as what is in fact being reported by 'pain' reports, it is possible to claim that just as people have come to repudiate demons, so they may come to deny the existence of pains.

Two main advocates of EM, then, seem to be squarely on the side of repudiating mental phenomena entirely. Another, P. Feyerabend, is more equivocal. His view is that the case for retaining our existing conceptual scheme may only be established by:

> ...the construction of alternative points of view and of alternative languages which radically differ from the established usage... More concretely: if you want to find out whether there are pains, thoughts, feelings in the sense indicated by the common usage of these words, then you must become (among other things) a materialist.[6]

There could, by implication, be a sense in which there are pains and the like - albeit, not the one conveyed by the normal use of the terms concerned - that a materialist could accept. Elsewhere, too, Feyerabend offers the materialist the choice of redefining terms relating to mental phenomena, compatibly with a materialist ontology.[7] This is clearly more in line with the construal of EM that we have been suggesting; what Feyerabend is saying is that EM may achieve the objective of avoiding non-physical items by revising our concept of pains and the like.

There are, moreover, problems over the more extreme construal of EM involving a total repudiation of things like sensations, arising from the status of reports of sensations, or, more correctly, reports purportedly of sensations, if EM is viewed in this way. If it is claimed that there are no such things as sensations, one implication for 'sensation' reports, reports using sensation terms that purport to be reports of sensations, which might be drawn is that they are

reports of nothing at all. And one version of EM which critics have identified says just this. Lycan and Pappas, who ascribe this view to Quine and Feyerabend, call it 'strong eliminative materialism', or 'SEM' for short. Rightly they regard it as high implausible; not merely because, as they say, it credits us with a great many false beliefs,[8] for it does seem to us we are reporting something by the use of sensation terms, but also, we may add, because, contrary to Quine's intentions, it does commit us to a denial of consciousness. If, in reporting 'sensations', we have been reporting nothing at all, then there must be no content, of whatever nature, present to consciousness that could be represented as what is reported. There must, in other words, be no particular content associated with 'sensation' reports. But then 'sensation' reports will be based, inevitably, purely on the presence of the belief that something is present, and nothing more, which is of course to assimilate the circumstances of such reports to those in the chicken sexing case. In that case, people simply find themselves with beliefs - that are usually true, while SEM has it that in making 'sensation' reports we simply find ourselves with beliefs that are invariably false. But 'sensation' reports are made in circumstances of conscious experiences par excellence. SEM, then, clearly will not do.

EM must have it that in making reports purportedly of sensations we are reporting something. Indeed, as our earlier quotation indicated, Quine speaks of reporting the facts of consciousness without assuming mental entities, which seems to imply, contrary to Lycan and Pappas, the view that 'sensation' reports do report something, the facts of consciousness, but mistakenly assume those facts to be entities of a mental kind. A problem of ascribing definite positions to philosophers is frequently that different texts can support different construals, and this certainly seems to have been the case with EM. In the case of Rorty there is less difficulty because he is quite explicit that there must be an account of what 'sensation' reports are reports of if not sensations, and his proposal is that they are reports of C-fibres firing and similar events.

Problems have, however, also been raised for the repudiation of mental phenomena taken in conjunction with the thesis that 'sensation' reports report something but not sensations. In Philosophy and the mirror of nature Rorty himself contends that 'it is always possible to object' to any claim of the form 'there aren't really any X's; what you have been talking about are nothing by Y's', that (a) ''X' refers to X's', and (b) 'we cannot refer to what does not exist'.[9] In other words, either there are sensations or 'sensation' reports are not reports of anything, for sensation terms can refer, if at all, only to sensations, and the terms used in a report must refer if the report is to be of something rather than of nothing. An argument to this effect is presented by Lycan and Pappas to show that the present representation of EM, which they call 'Weak Eliminative Materialism', or'WEM'for short, is unsustainable.[10] What is at issue are controversial questions in the theory of reference. A view of reference which clearly confirms the criticism of WEM is the 'Orthodox'[11] one, where the reference of terms is secured through their referents having the characteristics that constitute the conditions for the application of the term in question, characteristics that also constitute the referent the sort of thing named by the term. Thus, if the term 'pain', for example, only applies to something that displays certain intrinsically non-physical characteristics, then, if it refers at all, it will refer to pains and no purely physical phenomena could be referred to by it.

The Orthodox view has, however, been criticised. A departure from it which is particularly appropriate to WEM has been drawn attention to by Don Locke,[12] and originated by K. Donnellan.[13] Donnellan distinguishes between attributive and referential uses of descriptive terms, and points out that a term may in fact successfully refer even if the characteristics attributed to the referent are quite wrong. An illustration Donnellan

offers is where some individual is believed to have murdered Smith, although quite innocent of the offence. In these circumstances, the description 'Smith's murderer' may readily succeed in securing reference to that person even though the characterisation is quite wrong. Likewise, it may thus be proposed, we could refer successfully using the term 'pain' even if what is in fact referred to has none of the characteristics essential to something's actually being a pain.

What is more telling against WEM than the above appeal to the 'Orthodox' theory of reference is, however, the fact that EM ascribes to physical phenomena characteristics which many philosophers would hold to be sufficient for something's being, for example, a pain. For them, a content of consciousness is a sensation of a certain sort depending upon the causal circumstances typically or characteristically attending its occurrence. Thus, according to Locke, again,

> A sensation's being a sensation of cold is not a matter of how it feels but a matter of its being a sensation of the sort caused by frost and snow, and which causes shivering ...(and)... even if what you feel when you are wounded is not at all like what I feel... what you and I feel are both pains .[14]

The intrinsic character of a content of consciousness, whether it be a certain quale - or, indeed, a certain manner of cell firing, is on this view unimportant so far as the content's counting as a sensation of, say, cold or pain. What counts are the causal conditions - both what is apt to cause the experience and what it is apt to cause. But, then, the causal conditions ascribed to the occurrence of sensations when conceived as inherently non-physical entities, are recognised within EM also. Rorty, it will be recalled, envisages that EM will proceed on the basis of reference to brain processes taking on the explanatory role of sensations, and it seems unlikely that Quine would wish to deny that something is, for example, caused in us by cold objects like frost and snow, and causes us to shiver. If, however, such conditions

are admitted in EM and the present view is correct, that they determine the application of sensation terms, then EM cannot consistently repudiate sensations, for it admits conditions that suffice for calling something a sensation as that term is currently employed.

This argument requires further consideration, but first it may be useful to summarise the route by which attention has focussed upon it. We have seen that:

(1) EM has often been presented as denying the existence of mental phenomena.

(2) This denial could be taken to imply that sensation reports, which purport to refer to a certain class of mental phenomena, are reports of nothing whatever.

(3) This 'strong' version of EM, however, is unacceptable because of the number of false beliefs we must in consequence be deemed to have held, and because it is no better than the Analytical Approach in avoiding CSO.

(4) The alternative has it that there are no sensations, but sensation terms refer to, and serve to report, purely physical things like brain processes.

(5) But, in claiming sensation terms refer to brain processes, EM is saying they refer to things that fulfil a certain causal role, the performance of which appears to suffice for those thingsbeing sensations, so the only consistent choice appears to be between admitting sensations or reverting to (2).

5. The role of causal roles in sensation concepts

The idea that it is by reference to causal conditions that sensation terms gain application reflects the conviction, prevalent since the time of Ryle's Concept of mind and Wittgenstein's Philosophical investigations, that all terms must, if they are to serve in language at all, be applied on the basis of publicly

available conditions. The importance of the latter is that the ability to use language as a means of communication depends upon there being commonly understood rules governing its use, and only what is publicly available can allow for such understanding. In the case of sensations, moreover, all that is available to serve as the necessary publicly available conditions for discourse about them are the aforementioned causal conditions, the sensations themselves being confined to the consciousness of particular percipients. The pain that one person feels in his leg cannot be the content of experience for any other person; the only indication that others may have that something is amiss is the individual's behaviour and the antecedent causal conditions.

There is, however, a temptation to carry this seemingly plausible line of argument too far, and suppose that all we may admit as distinguishing one particular sensation concept from another is what is embraced in the public conditions governing the application of the term concerned. Particular contents of experience are excluded - at best the concept can embrace the idea of 'something going on', whatever it is, the sort of line associated with Smart. Armstrong, too, as we saw, favours in general a causal role account of concepts relating to mental phenomena. Such accounts are insufficient, however, since they commit us to an account of ordinary conscious perceptual experiences according to which they are just like what occurs in the chicken sexing case.

The mistake is to think that the conditions that allow a term to function in language constitute a complete analysis of the concept, the body of beliefs, of which our use of that term is an expression. CSO provides an illustration of the divergence that may arise here. Unlike the chicken sexing case, our experience of a sensation is, we believe, marked by a specific awareness of content. We each associate a particular quale with the occurrence of pain and the attendant causal

conditions, and would be very surprised to find a different one present. The fact that we cannot offer a significant characterisation of its intrinsic nature beyond what is common to all qualia - their simplicity and homogeneity - and cannot assure ourselves by inspection that others do experience the same qualia in connection with sensations that we do, simply means that the specific intrinsic nature of the quale we experience is not something that can be a condition of the use of sensation terms, not that the awareness of such intrinsic natures is to be excluded from our respective concepts of a sensation.

The position that we thus reach is that although EM requires that our concept of pain, say, changes, in that it cannot permit retention of the belief that we are presented with simple, homogeneous, intrinsically indefinable qualia, the change required is not such that what is reported when we are physically injured cannot be called pain. Indeed, the mistake would seem to be in supposing that what is reported is not pain.

Not all philosophers would accept this view of the matter, however. According to S. Kripke, 'Pain... is picked out by the property of being a pain itself, by its immediate phenomenological quality'.[15] The term 'pain', that is to say, gains application through the presence of 'an essential property',[16] the quale of pain. Deny the quale, then, and 'pain' does not apply to anything and there are no pains. The only defence of EM is then the unacceptable SEM. But the immediate phenomenological quality of pain is clearly incapable of providing a rule for the use of the term 'pain' in common discourse since individual instances of pain, as distinct from the behaviour characteristic of being in pain,is not commonly available - we cannot observe the quale others experience when they are in pain to assure ourselves that the quale they experience entitles their sensation to be called 'pain', as we would have to do if a particular quale was the essential condition for the term 'pain' applying. Sensation qualia could only constitute essential conditions for a purely subjective use of terms; a use private to each individual percipient, in the sense

that it could not, in principle, be learned by another since the condition governing its use was not available to them. But, as well as such a use not being the ordinary, common, use of sensation terms, the possibility of such a use has been rendered controversial by Wittgenstein's 'Private Language Argument'.[17]

The gist of this famous argument appears to be that if we are to be in the position of knowing the meaning of a word, it must be possible to justify our beliefs about when it applies, and to be able to do that we must be able to appeal to something independent of the belief in question as confirmation of it. No such independent confirmation is available where the condition purportedly governing the application of a term is the presence of a sensation quale, since the only test is whether the individual percipient believes a particular quale is the right one for the application of a given term. But, if this is so, there is no question of our knowing the meaning of such a term, thereby rendering such a use of terms absurd. Stated in this way, the Private Language Argument is explicit in appealing to a particular view of knowledge, according to which the possession of knowledge implies justified belief. To endorse it is therefore to pre-judge epistemological questions that are already, or will become at issue in the present discussion: notably, whether there is indeed acquaintance knowledge, which in itself implies neither belief nor justification, and whether beliefs can constitute knowledge in the absence of justification. Accordingly, it is not proposed to appeal to this argument in the present context. The prior point that the presence of a certain sensation quale could not serve as the basis for the common use of sensation terms will suffice in opposition to Kripke.

Again, then, the conclusion which presents itself as the most reasonable one for the construal of EM is that it claim: (1) that sensation terms do refer and that there are sensations; (2) that, contrary to our existing concept, they do not display qualia, nor

are they located where there is no physical phenomenon with which they may be identified; and (3) that they are in their intrinsic nature purely physical phenomena. This does not correspond to any of the usual versions of EM, but it is arguably the most consistent rendering of the Revisionary Approach that may be offered, aside from the unacceptable SEM.

The defence of materialism through the Revisionary Approach, however, does not need to be addressed solely to the problems about sensations, for there is of course the further problem of Secondary Quality qualia. We must, therefore, consider next how EM may come to bear on them.

6. EM and the Secondary Qualities

EM is not typically expounded in relation to the Secondary Qualities, probably because of Rorty's predilection for the proposed 'pain'-'firing C-fibres' conceptual revision as much as anything else. Another reason that may be cited for the concentration on sensations is that the ability to revise concepts in that context clears the way for similar revisions elsewhere in defence of materialism. Indeed, it could be said that the problem of qualia attaching to Secondary Qualities has, in effect, been dealt with in the consideration of sensations. Just as qualia attaching to sensations are repudiated without repudiating sensations, so, it appears, we may argue that qualia involved in Secondary Qualities may be denied without denying the existence of things like colours. All EM thus requires is that we revise our ideas about what colours are in their intrinsic nature, so that this is held to involve not qualia but certain wavelength compositions of electromagnetic radiation. But there are unfortunately reasons for thinking such a treatment on the analogy of sensations is too hasty.

In Chapter 2 it was objected to Primary Quality reductions of Secondary Quality concepts, like the above proposal involving electro-

magnetic radiation, that they omit what seem, on the basis of our experience, to be the essential characteristics of Secondary Qualities, the qualia they display. If qualia are essential to something being a Secondary Quality then they cannot be repudiated without denying the existence of Secondary Qualities, unlike the case of sensations. The only way then of avoiding the unacceptable SEM, which denies reference to the terms used in connection with repudiated entities, is to appeal to Donnellan's distinction between attributive and referential uses of descriptive terms. The latter did not need to be involved in the case of sensations because it emerged that EM recognises causal conditions which suffice for the application of sensation terms, such that what they apply to may properly be called sensations.

Now the crucial question in determining whether EM requires a repudiation of Secondary Qualities, given its need to deny qualia, is whether qualia are essential properties of these Qualities in the sense that, in common usage, something could only be called, say, 'red' if the characteristic quale were displayed. In this regard, there is more reason for saying, prima facie, that the presence of a quale could be a condition of common usage with colour terms than with sensation ones, for the quale of red is something that appears to be as publicly accessible as the surfaces of environmental objects that it characterises - it is through the experience of qualities like the quale of red, indeed, that we experience those surfaces and hence the objects that they are surfaces of. However, it may be that insufficient regard has been given here to the epistemic status of qualia. Not only are they indefinable, but are knowable in their intrinsic nature only through experiencing them, and these characteristics raise doubts as to whether the presence of a particular quale can be the basis of the common use of colour or other Secondary Quality terms. If it is to be the basis of their common use, users of these terms would have to be able to assure themselves that they are following the same conditions in applying a given such term, so

far as the presence of the quale is concerned, that other users do. But this would entail their finding out whether the quality others experience as present when they encounter objects to which a given colour term is applied, is the same as they themselves experience as present. There is, however, no way of inspecting the way others experience the world as being, as would be required to obtain this information, given that it cannot be verbally communicated. Thus the requirement of a common quale experienced as present cannot be a condition for the application of colour terms in common discourse. There are other things connected with the application of colour terms which, by contrast, can be found out - principally, the objects particular colour terms are standardly applied to and the discriminatory behaviour towards objects that their use characteristically engenders.

Thus the situation with the Secondary Qualities begins to look just like that with sensations after all. The publicly available conditions for the use of colour terms and the like, by which a common use of them may be arrived at, are patterns of verbal and discriminatory behaviour, as emphasised by Smart and Armstrong. This is not to say that all normal colour percipients do not experience the same quality as present on the surface of objects they commonly pronounce a certain colour. It is reasonable to assume that they do. But it is not something that we are able to verify so as to ensure that we are all using particular colour terms in accordance with the same conditions, unlike the behavioural conditions just cited. 'Use the term 'red' when you experience the same quale that other people experience as present when they look at ripe tomatoes' is an instruction for the use of the term 'red' that is of doubtful utility, as compared to 'Use the term 'red' to describe ripe tomatoes and whenever you see the quality that they present to the eye'. Secondary Quality concepts can thus, like sensation concepts, be said to embody elements that determine the application of the terms that express them, as well as elements

that do not. In the former category are beliefs relating to characteristic exemplars of the concept, and the discriminatory behaviour that application of the concept facilitates; and, in the latter, are beliefs to the effect that there is a characteristic quale common, say, to all red objects, and that all normal colour percipients experience red objects as having that quality. The belief that a quale is experienced is not, then, essential, from the point of view of common use, to an object rightly being called 'red' - it is, however, essential for the avoidance of CSO that there be some characteristic content deemed to be presented by such objects. Thus we can, after all, revise the concept to regard that content as electromagnetic radiation rather than a quale, without forfeiting the right to say that we are still experiencing red.

7. The Revisionary Approach need be no more radical than the Analytical.

As it is usually formulated by way of the received versions of EM, the Revisionary Approach appears inevitably a more radical defence of materialism than does the Analytical one. Whereas the latter purports to leave everything as it is, so far as our existing concepts relating to mental phenomena are concerned, EM seemed to entail a total repudiation of sensations, or at least the idea that we are not reporting sensations, in any literal sense, by the use of 'sensation' terms, and hence required that we redefine those terms if we are to retain their use. But we have since found that both in the case of sensations and Secondary Qualities, EM need not repudiate these entities at all, for it can retain the characteristics through which in common discourse sensation and Secondary Quality terms gain application; characteristics on the basis of which it is correct to call something a sensation or Secondary Quality of a certain sort. What EM, as a defence of materialism, does require that we repudiate are beliefs and ontological commitments which are involved in our existing sensation and Secondary Quality concepts, but which do not determine the application in common discourse of the terms concerned: namely, those

to the effect that the entities to which they apply present qualia, and may be located where there is no physical phenomenon with which they may be identified. Such beliefs are to be abandoned as false, to be replaced by ones which place sensations and Secondary Qualities squarely within the physical domain.

But the situation, given this construal of EM, is that this defence appears no more radical than the Analytical Approach, for no longer is there the difference that whereas the latter seeks only to exclude qualia and problematically located sensations, the former excludes sensations and Secondary Qualities altogether. Both approaches now recognise the latter, and EM can claim the advantage of not claiming that ordinary commonsense discourse about or beliefs relating to perceptual experience do not imply qualia and the like. Commonsense appraisal of CSO, by which the Analytical Approach was refuted, showed that such discourse and beliefs do indeed imply such things. The question is, however, whether even the comparatively modest conceptual revision entailed by the version of EM advocated here may be proceeded with. It does, after all, seem intuitively obvious that there are qualia. An examination of this question begins in the next Chapter.

# CHAPTER 6

## EM, the Given, and indubitable beliefs

### 1. Summary of Chapter

The present Chapter introduces the doctrine of the Given as a crucial one in philosophical criticism of EM. It begins with a version of the doctrine that has been particularly prominent in received philosophical criticism, what is referred to here as the Givenness of Perceptual Acquaintance (GPA), according to which there is an awareness of content that is both distinct from and the ultimate basis for the beliefs we hold about the world. Something like GPA is called attention to by Rorty as the motivation behind the criticisms of Cornman, and R.J. Bernstein, and it is shown how he appears correct in this judgement, and also how this conception of givenness conforms to the Acquaintance Analysis of perceptual experience.

The purpose of the appeal to GPA is to show that beliefs contradicting EM may not be revised or overthrown; it is intended to put their claim to truth beyond question. Accordingly, GPA connects with a conception of givenness that is argued here to be fundamental to criticism of EM, the Givenness of Perceptual Beliefs (GPB). Beliefs have this status if they are indubitable. GPB is investigated both as it features in the Rationalist and the Empiricist traditions in philosophy, in particular with regard to how, precisely, indubitability should be understood. Four possibilities are considered: that indubitability may be a matter of beliefs being (1) proved true beyond reasonable doubt; (2) psychologically entrenched; (3) such that there is no conceivable alternative possibility that would render the belief in question false; or, (4) logically immune from doubt. Of these, only the last is concluded to be of any value for philosophical criticism of EM. The task is then to clarify logical

immunity. The rationalist supposition that this may be a matter of beliefs being necessary truths is rejected in favour of the notion of 'logical immunity from doubt within rational discourse'. A preliminary appraisal follows of how GPB, conceived in these terms, may be satisfied, with reference to GPA and 'immediate perception' as possible criteria of indubitability. Finally, a distinction is drawn between 'type' and 'token' indubitability. With this, the stage is set for a final verdict on whether EM is refuted by beliefs contradicting the theory which satisfy GPB as thus conceived.

2. EM and the doctrine of the Given - introduction

Rorty has noted a tendency for criticism of EM to be based, at least implicitly, on a belief in what W. Sellars has called 'the Myth of the Given',[1] which Rorty describes as 'the view that awareness comes first and language must follow along and be adequate to the initial awareness'.[2] In fact, as Sellars recognises, the notion of the Given has a wider compass than this, and its relevance to criticism of EM extends within that wider compass, as we shall see. Before doing so, let us, however, consider Rorty's above conception of the alleged 'Myth of the Given' and how it is reflected in the views of some prominent critics of EM.

One thing that may first be said about the idea that awareness comes first and language, the descriptions we give, must do justice to this awareness, is that it bears a strong affinity to the Acquaintance Analysis of perceptual experience that we presented in Chapter 3. For, one way of putting this view is that language must be capable of expressing the beliefs or knowledge of fact that we acquire by acquaintance. To reinforce the point, we may return to the key propositions of the Acquaintance Analysis, A1, A2 and A3. These collectively give clear sense to the idea of awareness coming first and grounding particular beliefs and hence descriptions: A1 said that perceptual experience involves the

awareness of content, the conscious apprehension of spatio-temporal objects or qualities, otherwise known as acquaintance; and this awareness, by A2, does not itself involve beliefs as a condition of its occurrence - nor descriptions, these being the expression of beliefs; and, finally, A3 held that it provides our grounds or reasons for holding the beliefs we do about the world, indeed, our ultimate grounds for doing so. The moral, then, is that if a belief or description is sanctioned by this awareness, there is no possibility of it being overthrown, because it is sanctioned by what constitutes our ultimate ground for holding the beliefs we do about the world. If, therefore, EM requires that we give up beliefs or descriptions that fall into this category, it is refuted, and opponents of EM appear to have argued, in effect, that this is the case. It will be convenient for the future if we incorporate these ideas obtained from the Acquaintance Analysis into an initial specification of the Given, which we may call the Givenness of Perceptual Acquaintance (GPA). By GPA shall be meant the idea that:

> There is an awareness of content in perceptual experience which is both distinct from and the ultimate basis for the beliefs we hold about the world.

As well as linking Rorty's representation of what the notion of the Given involves with the Acquaintance Analysis of perceptual experience, GPA also accords with the views of Russell and Price, whose writings were drawn upon in formulating the propositions of that Analysis that GPA embodies, and are themselves noted exponents of the doctrine of the Given. GPA may, further, be used in developing Rorty's point that critics of EM are committed to this doctrine, a point that is the concern of the next Section.

3. The Givenness of Perceptual Acquaintance and criticism of EM

Two of the main critics of EM have been Cornman and R.J. Bernstein, and there are notable parallels among the criticisms they make. Bernstein holds that there is a significant disanalogy between Rorty's example of

the elimination of demons from our ontology and the proposed elimination of sensations. It is a disanalogy which can still be said to tell against the version of EM we are proposing, which does not envisage the repudiation of sensations, but rather a change in our beliefs about them. There are, Bernstein notes, sets of qualities that may be ascribed to the intrinsic nature of both demons and hallucinatory figments alike, the latter being the entities that are said to feature in our experience instead of the repudiated demons. For example, 'Imaginary demons can be short, fat, and red just as real demons can'.[3] Whereas, pains and brain processes may have no similar common intrinsic qualities so far as EM is concerned. Now it may be recalled that in presenting our version of EM, we argued that a quality may count as red whether its intrinsic nature is that of a certain quale or, say, a wavelength composition of electromagnetic radiation, but when Bernstein says imaginary and real demons may both be red he intends to convey that they may both exhibit the same phenomenal quality that is referred to by the term 'red' as presently understood.[4] His argument then is, in effect, that the ontological revision in Rorty's analogy of the repudiation of demons proceeds through retaining a common set of qualia, which is incompatible with both the total repudiation of sensations, as envisaged by Rorty, and the denial of sensations as non-physical entities as envisaged here.

The lesson to be drawn from this disanalogy is that ontological revision in the case of contents of experience is purely a matter of placing different theoretical constructions upon sets of phenomenal qualities or qualia that we experience irrespective of what we take those qualities to be manifestations of. A similar argument to that of Bernstein has, further, been presented by Cornman in criticism of EM as conceived by Quine. According to Quine, sensations may be regarded as posited or postulated entities, and likewise qualia.[5] By this, he means they are entities that we have at some stage decided,

be it consciously or unconsciously, to assume the existence of or, more bluntly, to believe in. Moreover, whatever we have thus postulated we may subsequently repudiate, if, for example, it serves the interests of simplicity or explanatory coherence to do so. Against Quine, Cornman has contended that sensations are things of which we are aware, and similarly, he would say, their qualia, and 'what we are aware of is not postulated'.[6] They are not something whose existence we have decided to assume until such time as it suits us to do otherwise; sensations are things we are obliged to recognise by our awareness of them. The category of postulated entities is that of entities which either are themselves, or which imply the existence of, things we are not in themselves able consciously to detect - individual electrons and such.

Now, of Bernstein it may be asked why ontological revision cannot extend to qualia; why, in other words, the disanalogy between the demons case and the sensations one should be deemed to tell against either the total repudiation of sensations or the revision of our beliefs about their intrinsic nature. Similarly, Cornman may be asked why we may not change our beliefs about what we are aware of even where there is no implication of the presence of things of which we have no experience in themselves. An obvious answer is that they each regard things like qualia as Given in experience, in conformity with GPA. Clear confirmation that this was the position Cornman took, at least in his initial opposition to EM, is provided by a remark of his to which Rorty[7] also has drawn attention. According to Cornman,

> It is most implausible to claim that a man's sensory phenomena have nothing like the features he experiences them to have, with the consequence that he has no special epistemological status even regarding those features he believes his sensory phenomena to have.[8]

'Special epistemological status' attaching to beliefs about our sensory phenomena is here said to result from our experience, which is just the situation envisaged by GPA, which, as we saw, proposed that there is an experience of content which provides our ultimate reasons for the beliefs we hold about the world, and there will therefore be no possibility of beliefs so grounded being overthrown. This could be put by saying perceptual acquaintance, as in GPA, renders beliefs indubitable, a notion which, as we shall see, is also a central one in the doctrine of the Given.

The commitment to the Given, as expressed by GPA, of both Cornman and Bernstein is further indicated by another line of criticism they jointly pursue against Rorty's suggestion[9] that, for example, sensation terms like 'pain' could be replaced by the appropriate neurophysiological term, 'C-fibres firing'. This substitution, which has attracted considerable critical attention,[10] has more point to it if EM is construed as denying that there are sensations than if it is taken to deny merely that sensations are intrinsically non-physical. It can, moreover, be criticised in that sensation terms recognise a causal role that may be common to organisms entirely lacking in C-fibres - like octopuses - as well as those that have such structures. This, however, is not the main objection made to the substitution. According to Cornman, saying 'My C-fibres are firing' instead of 'I am in pain' would have 'no ontological significance'[11] because it would merely be a case of the former expression taking over the descriptive role of the latter; in other words, we would be using 'C-fibres firing' to express what we now express by 'pain'. 'Pain', of course, expresses our existing concept of pain, which involves the belief that pain is characterised by a particular quale. Hence 'My C-fibres are firing' would, on this reckoning, imply the existence of a quale. But the question is why 'C-fibres firing' should take on the present descriptive role of 'pain' in its entirety. Cannot the function of expressing the belief in qualia be omitted? If it cannot, the objection

will bear on our own proposal also, for we have suggested that while retaining terms like 'pain', the concept expressed may be altered to omit the involvement of qualia. Cornman originally seems to have assumed that there was simply no choice but to retain the existing descriptive role of 'pain', and it would be consistent with his previously quoted remark, implying the need to recognise the features we experience our sensory phenomena to have, to suppose that his reason for assuming this is a commitment to something like GPA. Bernstein, in this regard, makes what is a quite explicit appeal to experience coming first and beliefs and descriptions following in the light of it, when making a similar objection to Cornman's, arguing that,

> If I am to describe these brain processes as I experience them then I must use phenomenal predicates to describe them or if I adopt a new language, the new expressions must at least express what I now express when I describe and report my sensations.[12]

It is noteworthy that in later writing in opposition to EM, Cornman[13] shows considerable sensitivity to Rorty's criticism that he subscribes to the Myth of the Given, but the result is that his oppostion becomes somewhat lame. We are unlikely to view the world in terms consistent with materialism because it is 'most unlikely' that we will ever be 'weaned from sensation terms and to purely physicalistic terms',[14] he argues - sensation terms being taken to express a concept implying non-physical entities. This, however, is purely a matter of conservatism, and a successful indoctrination program could bring the triumph of EM. But this is to give up any attempt to criticise EM on the ground of being rationally indefensible or incoherent, as the original criticism implies, and hence appears to concede that there is no substantive philosophical objection to it. Indeed, it appears reasonable to say that the attempt to prove the belief in qualia and the like may not be withdrawn inevitably requires an appeal to the doctrine of the Given

in some sense, and the remainder of this Chapter will be concerned with a sense of givenness which is distinct from GPA, although GPA connects with it, and is arguably central to oppostion to EM. This is what we shall call the Givenness of Perceptual Beliefs, or GPB, for short.

4. The Givenness of Perceptual Beliefs

According to W. Sellars, the arch opponent of the Given, 'the framework of givenness... has been a common feature of most of the major systems of philosophy, including... dogmatic rationalism and sceptical empiricism',[15] a pervasiveness which has involved many things being said to be given, among them, 'sense contents, material objects, universals, propositions, real connections, first principles, even givenness itself'.[16] In this list, GPA, a manifestly Empiricist rendering of the Given, would recognise sense contents, things like sensations, as givens, and also universals - recurrent qualities like qualia. On the other hand, propositions and first principles are more characteristically Rationalist givens. In this context, Descartes' 'cogito ergo sum' comes to mind as a proposition and first principle that is the basis of his account of knowledge by virtue of its being, in his view, absolutely indubitable. Indubitability thus serves as a standard for givenness. But it is not only Rationalists who employ indubitability in arriving at the Given. H.H. Price, in his famous introduction of the Given, which we have said is, for him, conceived as in GPA, argues as follows:

> When I see a tomato there is much I can doubt. I can doubt whether it is a tomato I am seeing, and not a cleverly painted piece of wax. I can doubt whether there is any material thing there at all... One thing, however, I cannot doubt: that there exists a red patch of a round and somewhat bulgy shape, standing out of a background of other colour patches and that this whole field of colour is directly present to my consciousness.[17]

The givenness of things like red patches, as opposed to material objects like tomatoes, is, then, indicated by the indubitable presence of the former by contrast to the latter, and the manner of their being given - direct presence to consciousness, as characterises aquaintance - is similarly indicated on a basis of indubitability.

Now, the possibility of beliefs or propositions that are Given on the basis of being indubitable may have crucial implications for EM, for if among such beliefs are ones concerning the content of perceptual experience that contradict that theory, such as ones relating to the presence of qualia, then it is refuted. We cannot consistently withdraw as false beliefs that must be regarded as indubitably true. Just such items are, moreover, implied by our existing concept of red, which is something Price, in the conditions described in the above quotation, holds to apply indubitably to the content of perceptual experience. We may thus define a further sense of the Given as it bears on EM, which may be called the Givenness of Perceptual Beliefs (GPB), such that,

> Beliefs relating to the content of perceptual experience are Given if (and only if) they are indubitable.

EM is refuted, then, if beliefs inconsistent with it satisfy GPB. The question, of course, is by what right particular beliefs are claimed to be indubitable, and one possibility that has already been suggested is GPA. By this, beliefs will satisfy GPB where our reason for holding them is our awareness of content that provides our ultimate reason for holding any beliefs about the world, an awareness that also constitutes knowledge of a more basic kind than any knowledge of truths. This is what Russell would say, and presumably Price also, although his procedure for identifying indubitable beliefs in pursuit of content that is Given can be construed as providing support for the claim that beliefs satisfy GPB independent of any appeal to GPA, as shall be seen.

The question of by what right particular beliefs relating to perceptual experience may be claimed to satisfy GPB, however, calls for clarification of how the term 'indubitable' should be understood in this context. It may in this regard be noted, first, that to say something is indubitable means that it is beyond doubt, or as Price says, cannot be doubted. To doubt is, moreover, to be unsure or undecided as to the truth of the particular proposition or belief, which implies it is something we are at liberty to suppose false as well as to suppose true. Our being in a state of doubt is the result of entertaining both suppositions, and a belief will hence be indubitably true, therefore, if it is one we are not able to suppose false. But it is at this point that matters become less clear, for there are different ways in which the inability to suppose false may be construed. There is, first, the case where we have what is deemed proof 'beyond reasonable doubt' that a belief is true, where the supposition of falsity cannot reasonably be entertained. Then there is the case where we can think of alternative possibilities that would render our belief false but we are psychologically incapable of entertaining them, what may be called indubitability through 'psychological entrenchment'. A third construal is where we are quite simply unable to think of any way things might otherwise be that would render our belief false. This may be described as indubitability through 'no conceivable alternative possibility'. Finally, there is indubitability resulting from the ability to suppose the belief in question false having been somehow logically excluded, which may be called indubitability through 'logical immunity from doubt'.

The latter sense of indubitability is the one associated in particular with the Rationalist tradition in philosophy, as shall be indicated later. It is also the sense that is required for philosophical refutation of EM. For, each of the alternatives to logical immunity - proof beyond reasonable doubt, psychological entrenchment, and no conceivable alternative possibility

- allow that it might, without giving rise to any contradiction, be supposed that the belief in question is false, and it is a special claim of philosophical appraisal that it brings logical considerations to bear, and hence the principle of non-contradiction, which is arguably the fundamental logical consideration. On this basis alone is it possible to place the beliefs that EM wishes to challenge, beyond rational dispute. It is in this way, too, that philosophers can claim that whatever good reasons scientists may have for refusing to acknowledge the existence, say, of qualia, they are in fact bound as participants in rational discourse to recognise such entities.

The idea of philosophy being in a position to over-rule science in this way, in performing its function, accords with Rorty's claim that 'most philosophers',

> Have agreed that philosophy is a discipline which takes as its study the 'formal' or 'structural' aspects of our beliefs, and that by examining these the philosopher serves the cultural function of keeping other disciplines honest, limiting their claims to what can be properly 'grounded'.[18]

In particular, the idea has been that philosophy can limit the claims of other disciplines concerning what is true by determining, through bringing logic to bear, what, in its broadest terms, or ultimately, we can be said to know, what is not susceptible to doubt. A case in point is philosophical criticism of materialism, and it is noteworthy that Rorty, in his book Philosophy and the mirror of nature, prefaces a critique of the above conception of philosophy with an attack upon philosophical objections to materialism. The connection between the two is the notion of the Given. The conclusion here will indeed be that philosophical criticism of EM in the above tradition does not invalidate that theory, although the failure of such criticism is not then treated as an indication of the bankruptcy of the tradition itself, as Rorty argues in his book, for this raises questions beyond the scope of the present discussion.

To support our conclusion about the failure of criticism of EM, it is necessary to do justice to attempts that may be made to show that beliefs incompatible with EM are in fact logically immune from doubt, and to this end it is necessary to say more about what this notion entails, besides an appeal to the principle of non-contradiction. But, first, more needs to be said concerning the rejection of the other renderings of indubitability; in particular, their allowing 'indubitable' beliefs to be supposed false without engendering any contradiction. This demand arises, in addition, because some of the rejected notions have in fact featured in philosophical renderings of indubitability, notwithstanding the above.

5. Other construals of indubitability rejected

The first of the alternative renderings of indubitability that was mentioned has this as a matter of beliefs being proved true beyond reasonable doubt. Reference to 'reasonable doubt' is intended to reduce the range of possible grounds for supposing a particular belief might be false to exclude ones that seem highly unlikely. It is thus quite compatible with a belief's being judged indubitable in the sense of proved beyond reasonable doubt, for the belief to turn out to be false after all. This is by no means unknown in contexts where this sort of standard is applied in determining the worthiness of acceptance of a belief, as it is in, say, the administration of justice, or scientific theorising. Its advantage is that it allows decisions actually to be reached on whether to accept beliefs, that would be prevented by the demand for proof beyond all possible doubt, and this more than offsets the fact that decisions so reached are not entirely infallible. Proof beyond reasonable doubt has, by contrast, not characterised the appraisal of beliefs in philosophy; rather, as typified by Descartes, the concern has been with proof beyond all possibility of doubt. This contrast between philosophy and other activities in which beliefs are appraised is a reflection of its afore-

mentioned concerns with knowledge in an ultimate absolute sense, and with what may be 'properly grounded', as Rorty putsit.

Turning now to the second alternative, indubitability based on psychological entrenchment, it would appear that this is of no more use than the first for philosophical purposes, for there is evidently no contradiction in supposing that what we are psychologically or constitutionally incapable of believing to be false actually is false. Beliefs of this nature have characteristically been challenged in philosophy. For example, the belief in the public objects of common sense, which Quine has judged to be 'an original trait of human nature',[19] has periodically been challenged on the ground that none of the evidence available to us for their existence actually entails their existence. The evidence of the senses by which we infer such objects, could have been produced by a malign demon intent on deceiving us into thinking there were such things (Descartes), or we could be mere 'brains in vats' (Putnam).[20] But, irrespective of the logical refutations that have tended to accompany such sceptical conjectures, it is doubtful whether any philosopher has seriously entertained them in everyday life. Serious doubts about the reality of the world, or, to give another example, the existence of other persons, are generally associated with insanity.

Having said this, however, it should be noted that causal processes have been appealed to in philosophy as a ground of indubitability, so suggesting that psychological entrenchment, which is itself a matter of our being caused to hold beliefs rather than arriving at them through rational reflection, is not, after all, to be discounted. It has, for example, been pointed out that according to John Locke, empirical knowledge has a foundation of 'simple ideas' about 'particular existences', and because 'the simple ideas that we have of things are caused by those things...they cannot therefore in general be wrong'.[21] Thus was

introduced the conception of empirical knowledge as founded upon sense impressions that has been a recurrent theme of Empiricism, the idea being that the senses act upon the cognitive faculties so that an accurate representation of the content presented by the senses is impressed upon them.

But there is, it seems, no contradiction in supposing this account mistaken. It cannot merely be assumed that the world has acted upon our minds to produce a correspondence between our representations of it and the way it is, certainly not given the kinds of sceptical possibilities outlined above. Not only must they be refuted, so it may be argued, but it must be put beyond question that, given there is a world that acts upon our senses, it has produced the required correspondence. Whether a logical argument may be constructed to this effect will in fact be considered later,[22] but, for the present, it may be concluded that the very need for such an argument establishes the insufficiency of the present appeal to psychological entrenchment as a basis of indubitability.

With this, consideration may turn to the final alternative rendering of indubitability, which was in terms of there being 'no conceivable alternative possibility' that would provide grounds for supposing the belief false. By 'no conceivable alternative possibility' was meant no other possibility could be thought of or imagined. The contrast with psychological entrenchment is thus, to repeat, that while in the latter case alternatives can be thought of, we are unable constitutionally to accept them. There is, moreover, evidence that some philosophical treatments of indubitability do treat this as a matter of no conceivable alternative possibility. A case that might be so viewed is Price's consideration of what he cannot doubt when he sees what (he thinks) is a tomato. He can doubt that he is seeing a tomato because he can think of other possibilities such as seeing a wax imitation, or there might be no material thing there at all. By contrast, he cannot doubt

that he is in these circumstances experiencing a red patch, and the reason for this, it would appear, is that unlike the belief that he is seeing a tomato, for which he can think of other possibilities that provide grounds for supposing it false, he cannot think of any for the belief that he is seeing a red patch. This, at least, is one obvious way of interpreting Price's argument.

As a construal of indubitability for philosophical purposes, the appeal to 'no conceivable alternative possibility' is, however, readily shown to be deficient, and for reasons similar to ones recently encountered in opposition to psychological entrenchment. It may be objected, for example, that Price fails to think of at least one possibility that would make it false that he was experiencing a red patch - namely, if it were merely to seem to him that a red patch is present. Likewise, a materialist might object that he fails to appreciate the possibility that insofar as seeing something red, as currently understood, implies the presence of an intrinsically non-physical quality, his belief may be false since what he experiences may be nothing more than a certain wavelength composition of electromagnetic radiation. Price might respond that the materialist is simply being perverse in claiming to be able to imagine this alternative possibility; whereupon the materialist may say that Price is simply displaying limited capacities of imagination. Clearly, then, the inability, on a personal basis, to think of alternative possibilities may not serve to place a belief beyond rational dispute, for it is necessary to confront those who claim that they can think of ones. Moreover, just because we cannot think of another possibility does not, of course, entail that there is not one.

It has now been shown that none of the alternative construals of indubitability imply that there is any contradiction involved in supposing that beliefs that are indubitable in any of these senses

are false. Also, it has been shown that despite the fact that there has evidently been some appeal to these alternatives to logical immunity from doubt - in particular, to the psychological entrenchment, and 'no conceivable alternative possibility' ones - they are, it seems, incapable of fulfilling any philosophical purpose. They do not serve to identify what ultimately we can be said to know, nor place beliefs beyond rational dispute, as are the characteristic purposes of the appeal to the Given; nor, therefore, do they assist in resolving the philosophical debate between advocates and opponents of EM. What is required to resolve that dispute one way or the other through an appeal to indubitable beliefs, is to specify this notion in terms that are binding equally on both parties as participants in rational debate, and for this purpose, as with the other philosophical objectives pursued through GPB, specification in terms of logical immunity from doubt alone will, it seems, serve. But if this is the case, the notion of logical immunity from doubt must be considered in more detail, a task to which we now turn.

6. Indubitability as logical immunity from doubt

So far, the suggestion has been that a belief is indubitable, in the sense of being logically immune from doubt, if supposing it to be false gives rise to a contradiction. There are, however, more or less direct routes by which supposing a belief false may result in this. The most obvious and direct route is through its being self-contradictory to suppose the negation of the proposition in question to be the case. Thus the proposition 'there are no square circles' can be claimed to be logically immune from doubt, and hence also the belief that there are no such items, because it is self-contradictory to suppose that there are square circles. Where the negation of a proposition is self-contradictory, the proposition concerned is said to be logically necessary, so to base logical immunity from doubt upon propositions whose negation is self-contradictory is thus to make it a matter of propositions that are logically necessary. This is, moreover, a sense of logical immunity from doubt that has featured

in the Rationalist tradition, a tradition with which, as we said, indubitability qua logical immunity from doubt has been associated. For Descartes and Leibniz, for example, the existence of God is indubitable because it can be proved by logical argument that it is necessarily the case that God exists.[23]

It is, however, questionable whether logical immunity from doubt can be construed as a matter of the propositions or beliefs concerned being logically necessary, at least for present purposes. To begin with, if this construal were to be employed against EM, the claim would have to be, for example, that it is logically necessary that people experience sensation and Secondary Quality qualia. But reflection suggests that while it may be a matter of fact that such qualia are experienced, it is not a matter of logical necessity. There is, in other words, no contradiction in supposing people do not experience them, although it may, of course, be false to suppose this. This is not, it may be noted, a view that Leibniz would support, for, having deduced the logical necessity of God's existence, he infers, by the same necessity, that He created a world with just the things in it that this 'best of all possible worlds' has - in other words, just what is the case in the world is necessarily so. But then the validity of these inferences has proved highly suspect, beginning with the attempt to show that God exists as a matter of logical necessity, a point that will be developed further in Chapter 8.

In more recent times, the idea of beliefs being indubitable in the sense of being logically immune from doubt has tended to be explained not as a matter of the logical necessity of the propositions concerned, but of the fact of a given belief's being held logically implying the truth of that belief.[24] Beliefs relating to our own sensations have been considered particular examples of beliefs that are indubitable in this sense, so that one claim would be that it is logically necessary that if we believe that we are in pain then we <u>are</u> in pain. Moreover, insofar as our belief that we are in pain, on our

existing concept of pain, is the belief in the presence of something intrinsically non-physical, it correspondingly follows that something intrinsically non-physical is present. This sense of indubitability will, if sustainable, thus have serious consequences for EM.

Quite frequently philosophers have used the term 'incorrigible' instead of 'indubitable'[25] in connection with beliefs where the fact of holding them logically implies their truth, 'incorrigible' meaning, literally, incapable of being corrected. The rationale of this locution is that there is no question of correcting what there is no question of our being mistaken about, and the latter sort of beliefs are clearly in this category. But the use of 'incorrigible' in the present context is a considerable departure from ordinary usage, where it is not the impossibility of error but the inability to correct any error that may arise, that constitutes the incorrigible. Having regard both to this and the fact that the term 'indubitable' is already established in the discussion, 'incorrigible' will not be perpetuated here.

The crucial question about the present representation of indubitability in terms of logical immunity from doubt is whether the immunity conferred is sufficiently strong. It will assist in addressing this matter if the representation is given symbolic expression, using 'L' to stand for the logical necessity operator, and 'Bap' for the claim that an individual a believes a particular proposition p. We may now say that the belief that p is indubitable in the present sense if, for any given individual a, it is the case that L (Bap⊃p). Now, the question over whether indubitability, as thus construed, is sufficiently strong is prompted by the fact that neither the proposition that p nor the holding of the belief that p by someone, are themselves logically necessary. What, however, is established, given that certain beliefs do satisfy 'L(Bap⊃p)', is that the only way the truth of the beliefs concerned may consistently be denied is to deny that anyone ever holds them. For, the formula 'L(Bap⊃p)' is equivalent to 'L~(Bap&~p)',

the claim that the conjunction of 'Bap' and 'p' is self-contradictory.

The position would then be that if beliefs that imply the existence of intrinsically non-physical items do satisfy 'L(Bap⊃p)', the only recourse for the advocate of EM would be to deny that such beliefs are held. But then the existing formulation of EM takes it for granted that they are held - specifically by opponents of materialism - and argues that such beliefs may be withdrawn as false. Indeed, it is difficult to see how there could be a rational debate here if there were not opposing ontological beliefs separating opponents and defenders of materialism, for then there would be nothing to disagree over. Perhaps, however, the advocate of EM, confronted with beliefs satisfying the above formula, could amend his position and grant not that people have actually held beliefs of this nature which are inconsistent with materialism, but that it has merely seemed to people that they hold such beliefs. That would explain the existence of the debate without having to accept the falsity of the claims of materialism. But this sceptical manoeuvre is not one which, it appears, may itself be made within rational discourse, for the belief in intrinsically non-physical constituents of the world is not, it seems, one which, more than any other, admits of doubt over whether it has ever been held, and hence to take this course is to occasion a general scepticism about whether people actually hold the beliefs they think they hold, which puts an end to rational debate, since anyone committed to such scepticism is logically obliged to refrain from expressing their view on any matter. They could, of course, resist this logical obligation, but the result again would be to transcend the bounds of rational discourse. Rational discourse is discourse bound by logical necessity.

This appraisal of the force of the appeal to indubitability based on the formula 'L(Bap⊃p)' suggests that what obliges the advocate of EM to accept, contrary to his existing position, that beliefs incompatible with materialism may not be supposed false, given that such beliefs

satisfy this formula, is not that fact by itself, but the fact that, once it has been established, his only recourse is to claims that commit him to a repudiation of presuppositions of rational discourse - in particular, a general scepticism about whether people hold the beliefs they think they hold, or worse, the refusal to be bound by logical necessity. What we have, then, is an argument, that purports to be logically compelling, involving a claim of the form 'L(Bap⊃p)', and which has the consequence that supposing the belief in question false leads either to the contradiction, 'Bap&~p', or the repudiation of presuppositions of rational discourse. The resulting indubitability may be described as a matter of 'logical immunity from doubt within rational discourse'. This conception of indubitability need not, moreover, be confined to arguments involving the usual logical rendering of indubitability expressed by the formula 'L(Bap⊃p)', but may, as we shall see, apply more widely. And, with this in mind, we may now present a fuller definition of the Givenness of Perceptual Beliefs (GPB) based on the notion of logical immunity from doubt within rational discourse that has just been introduced. It is convenient to divide the definition into two clauses thus:

(1) Beliefs relating to the content of perceptual experience are Given (GPB) if (and only if) they are indubitable in the sense of being logically immune from doubt within rational discourse.

(2) Beliefs are logically immune from doubt within rational discourse if (and only if) there is an argument governed by logical necessity involving those beliefs, or the propositions concerned, which has the consequence that supposing them to be false results in a contradiction that may only be avoided through repudiating presuppositions of rational discourse.

## 7. Transcendental arguments as a basis for GPB

The above enlarged definition GPB has been the culmination of an appraisal of how philosophical opposition to EM may be based upon the

identification of indubitable beliefs concerning the content of perceptual experience. It was concluded that nothing short of construing indubitability as a matter of logical immunity from doubt will suffice for philosophical purposes, and certainly nothing short of this would bring philosophical dispute over EM to a conclusion binding on all participants in it. To render logical immunity from doubt as a matter of the logical necessity of the disputed propositions was, however, too strong a construal, which led, by way of the usual logical rendering of indubitability based upon the formula 'L(Bap⊃p)', to the above specification, which itself surely puts beliefs which satisfy it beyond rational dispute.

Now, as well as embracing logical arguments involving the latter formula, there is another kind, which will be of particular importance later on, that falls within the scope of GPB as now defined, and that is what are known as 'transcendental arguments'. The term 'transcendental argument' derives from Kant, who was notable for his employment of such argument, as in his 'transcendental deduction of the pure concepts of the understanding'.[26] Unlike the common construal of indubitability, based on the 'L(Bap⊃p)' formula, transcendental arguments do not seek to show that the very fact of a belief's being held entails its truth. Rather, they seek to show that the belief or proposition that is in question is a logical presupposition of another which is not in question, so rendering the former belief just as secure as the latter. Thus, Kant, in the aforementioned transcendental deduction, takes for granted that we, as individuals, have experiences, and seeks to deduce 'the a priori conditions upon which the possibility of experience rests'.[27] A later use of this mode of argument, in a similar context, is made by P.F. Strawson, who seeks to show that 'it is a necessary condition of one's ascribing states of consciousness, experiences, to oneself... that one should also ascribe them, or be prepared to ascribe them to

others'.[28] By demonstrating this, he is able to refute any philosophical theory according to which, or which has the consequence that, while we may ascribe consciousness to ourselves, we may not do so to others; a refutation based upon what the theory claims being such as to engender a contradiction.

Strawson's argument may be used to illustrate the logical form of transcendental arguments as suggested by these examples. First it is shown that it is logically necessary that if a proposition, q, such as the proposition that we may ascribe states of consciousness to others, is false, then a further proposition, p, such as that we may ascribe states of consciousness to ourselves, is also false: in symbols '$L(\sim q \supset \sim p)$'. This is of course logically equivalent to '$L \sim (p \& \sim q)$', which asserts that it is self-contradictory to assert p while denying q. Since, moreover, the proposition represented by 'p' is one that has been taken for granted, it is shown that we are not at liberty, while doing this, to suppose the proposition represented by 'q' to be false, at least within the confines of rational discourse, in which, we have said, the principle of non-contradiction is an essential element.

Relating the transcendental mode of argument to the dispute between advocates and opponents of EM, it is evident that the latter will prevail if propositions inconsistent with the revisions in our beliefs that EM proposes must be granted as logical presuppositions of propositions that are granted by both parties. But then any such argument will inevitably be inconclusive if the advocate of EM is at liberty simply to withdraw assent from the proposition in question. The answer here is to appeal to premises in constructing transcendental arguments that the advocate of EM is obliged to grant as a participant in rational discourse; that is to say, to substitute for p in the logical schema, propositions that are presuppositions of rational discourse. On this basis, transcendental argument is brought squarely within the terms of GPB, for the situation will then, assuming the argument supplied to be a valid one, be that supposing a certain proposition, q, to be false

results in a contradiction that may only be avoided through repudiating presuppositions of rational discourse. It may be noted, indeed, that GPB itself is transcendental insofar as it claims that there are propositions that may not, by the very terms of rational discourse, be supposed false without transcending the bounds of such discourse.

In later Chapters, a number of arguments in the transcendental mode will be considered, each falling within the terms of GPB by virtue of appealing to presuppositions of rational discourse. In the remainder of the present Chapter, however, having now introduced transcendental arguments as an important means by which the attempt to satisfy GPB in opposition to EM may be made, we turn to further matters that must be addressed preparatory to a consideration of whether any such attempt is successful.

8. Satisfaction of GPB - further consideration

So far, we have mentioned forms of argument by which GPB may be satisfied, in particular the usually encountered one involving claims of the form 'L(Bap⊃p)' and, just now, transcendental arguments. But, before proceeding further, it is appropriate to consider more specifically how GPB might be satisfied. To begin with, it may be asked how GPA bears on this. GPA, as was argued earlier in this Chapter, is intended to show that beliefs, and descriptions through which they are expressed, that contradict EM may not be overthrown, because they are based on the awareness of content that provides our ultimate grounds for holding the beliefs we do about the world. If it is claimed, moreover, that a belief may not be overthrown or enjoys 'special epistemic status', as Cornman puts it, by virtue of our acquaintance with content, then this is in effect to say they are indubitable. Thus, the role of GPA in opposing EM is as a ground for indubitability. But we have since concluded that philosophical opposition to EM that appeals to indubitability must construe indubitability as a matter of the beliefs concerned satisfying GPB as now defined, a matter of their

being logically immune from doubt within rational discourse. Hence, if GPA is to have an effective role in opposing EM, it must be able to confer this immunity upon beliefs that contradict that theory. The effect of GPA must not, in other words, be simply the psychological entrenchment of beliefs, say, or our being unable to think of any alternative possibility. Whether GPA may indeed enable GPB to be satisfied will be the concern of the next Chapter.

Another more specific means that might be suggested for identifying beliefs that satisfy GPB is a criterion of indubitability that has often featured in the Empiricist tradition. The criterion is that of immediate or direct perception.[29] Beliefs relating to the content of perceptual experience characterise immediate perception if those beliefs are held without any involvement of inference. Such non-inferential beliefs, and the 'immediate perception' they characterise, are held to be indubitable. A particular exponent of this idea was Berkeley, who contrasted the case of our hearing a coach passing in the street, as a case of mediate as opposed to immediate perception, with the sensation of sound which we immediately hear in that case. The point is that when we take ourselves to be hearing a passing coach we are inferring that it is the latter that we hear, and so there is room for error in that perception. But there is no inference in the case of perceiving the sound sensations, so the belief there is indubitable.

The crucial questions for this criterion of indubitability are what is the nature of the inferences the absence of which gives us immediate perception, and in what sense are beliefs that characterise that perception indubitable? Clearly, the sort of inferences here cannot be deductively valid ones, for then mediate perceptual beliefs, ones obtained on the basis of inference, would be as indubitable as any immediate ones from which they are inferred. From the passing coach example, it is evident that the sort of inference that makes mediate perception is where a judgement is made as to the most likely cause of the noise that is heard. Just the same sort of contrast may be

drawn with Price's example of perceiving a tomato. The perception of a tomato is inferential, and hence liable to error, since it involves the judgement that a tomato is the most likely thing present in the circumstances, although it is possible that what is in fact present might be a wax imitation or a hallucinatory figment. No similar inference is involved in the judgement that something red and round is present.

It is now apparent that the indubitability of non-inferential perceptual beliefs is a matter of where we are and where we are not able to think of alternative possibilities that would make the belief in question false, with the latter sort of beliefs being the indubitable ones. For, inferential beliefs are ones where we judge the most likely out of the alternative possibilities we can think of as to what is present; if we confine ourselves to what in the content of our experience we can think of no alternative possibilities for, we will have what is for us a non-inferential belief. Hence the indubitability of non-inferential perceptual beliefs is only as strong as that of beliefs for which we can think of no alternative possibility that would render them false, a sense of indubitability that we have already had to reject. Non-inferential beliefs, as thus understood, are therefore no more acceptable as a criterion of indubitability than the sense of that notion to which they appeal, and clearly cannot, of themselves, suffice for satisfaction of GPB. Similarly suspect, therefore, is the notion of immediate perception, construed in terms of non-inferential perceptual beliefs, as a criterion for its satisfaction; although it should be noted that other interpretations of immediate perception will later be encountered in the context of attempts to show that beliefs contradictory of EM satisfy GPB.

9. Type and token indubitability

Further consideration of whether, and by what means, beliefs are capable of satisfying GPB can now be left to later Chapters, but there is a distinction that should be taken into account in addressing this question which it is appropriate to deal with as the final concern of the present Chapter. The distinction is between what may respectively be called 'type' and 'token' indubitability. An illustration of what is meant here is provided by the belief that we are in pain. This belief, in common with all others concerning contents of perceptual experience, is held intermittently to be true. That is, there are times when we believe we are in pain, and times when we do not - only the very unfortunate have the belief continuously. The holding of the belief that we are in pain on a particular occasion can thus be called a token of the belief type, 'believing oneself to be in pain'.

This distinction between tokens of a belief type and the belief type itself bears upon satisfaction of GPB since the question arises of whether all individual tokens of a given belief type must be shown logically immune from doubt in order to defeat EM, or whether only some tokens must have this status. If the former, we may speak of the requirement being for type indubitability and if the latter, token indubitability. There is, moreover, a distinction within token indubitability between the requirement that particular tokens be positively identified as ones which, out of the belief type, are indubitable, and the lesser requirement that it be proved merely that it is indubitable that some tokens of the type are true, even if it is not possible to single out particular tokens as indubitable. Here what cannot be maintained within rational discourse is that no token of the belief type is true. It is further evident that the latter suffices to defeat EM, for EM does wish to say that there are no tokens of particular belief types that are true; namely, tokens

involving the belief that a particular quale is present, and the like. Let us, then, define type and token indubitability as follows:

(1) Type indubitability is where there is an argument governed by logical necessity which has the consequence that supposing that any token of a particular belief type is false results in a contradiction that may only be avoided through repudiating presuppositions of rational discourse.

(2) Token indubitability is where there is an argument governed by logical necessity which has the consequence that supposing that every token of a particular belief type is false results in a contradiction that may only be avoided through repudiating presuppositions of national discourse.

It is clear how both type and token indubitability as thus defined conform to the terms of GPB, since they have simply been specified by modifications of the second clause of that definition. We will hold, moreover, that GPB may be satisfied by proofs either of type or token indubitability. Most of the arguments that will be encountered in later Chapters are proofs merely of token indubitability, although the most common rendering in terms of the formula 'L (Bap⊃p)' does imply type indubitability. For, the claim here is that if, on any occasion, a person holds the belief that p then it is true that p. It is arguably because this common rendering of indubitability implies type indubitability, and other ones tend not to be considered, which explains why the type-token distinction appears to have received little attention in this connection. A further point about the definition of token indubitability is that it is neutral on the question of whether particular tokens are in themselves indubitable, or whether merely it is indubitable that some tokens of the type are true, even if they cannot be identified. The neutrality here is desirable since to define two sorts of token indubitability, as would otherwise be required, introduces unnecessary complication,

in particular, when it will emerge that none of the arguments for token indubitability seem to sanction the identification of particular tokens as absolutely indubitable.

The task now is to begin an inquiry into whether beliefs contradicting EM satisfy GPB, whether through being type or token indubitable. The fate of EM as a philosophical theory depends on its outcome, and since this is a central claim of the present discussion of the theory, it is worth recapitulating how it has come to be made. We have found that:

(1) Much criticism of EM has implied the view that our awareness of content in perceptual experience precludes the revision in our beliefs about the world that EM is committed to - it has, in effect, appealed to GPA.

(2) But the central consideration for the inability to revise beliefs is the inability to doubt their truth - a belief may not be revised if it may not be supposed false.

(3) For philosophical purposes, and, in particular, to establish any binding conclusions in the philosophical debate over EM, beliefs that contradict EM must be shown such that they either may or may not be supposed false, where this is a matter of whether they are logically immune from doubt as specified by GPB.

(4) GPA is thus to be regarded as one among a number of ways that may be proposed of showing that beliefs contradicting EM satisfy GPB.

(5) GPB may be satisfied through either type or token indubitability.

The first stage in the inquiry is an examination of whether GPA does enable GPB to be satisfied to the detriment of EM, and this, as stated previously, is the concern of the next Chapter.

# CHAPTER 7

## A refutation of the Givenness of Perceptual Aquaintance

### 1. Summary of Chapter

The definition GPA claims that there is an awareness of content in perceptual experience that is both (1) distinct from, and (2) the ultimate basis for the beliefs we hold about the world, and this conception of givenness is now subject to a two-pronged attack corresponding to these two contentions. The second one is the first that is addressed, as the criticism of the first to be presented here is the more fundamental. At the outset it is pointed out that if GPA is to be the basis for beliefs in the context of a philosophically adequate refutation of EM, then it must show that beliefs contradicting materialism satisfy GPB. It must, in other words, render them logically immune from doubt in the sense explained in the last Chapter. Following on from arguments of philosophers opposed to a conception of givenness as embodied in GPA, it is shown that there appears to be no means consistent with GPA whereby perceptual acquaintance may confer such immunity upon beliefs. This in itself suffices to nullify GPA as a basis for opposing EM. The second prong of the critical attack then shows that the very idea of an awareness of content that does not involve beliefs - or classification of the content, to put it another way - as a condition of its occurrence, is indefensible since such awareness would be completely non-specific. It could be of anything or nothing at all. This second criticism has implications beyond the confines of the attempt to show certain beliefs satisfy GPB. In particular, it means that the Acquaintance Analysis of perceptual experience is inadmissible, and commonsense intuitions as to how the chicken sexing case differs from ordinary perceptual experience must similarly be rejected. It also has implications for the notion of a quale itself. These matters are

addressed at the close of the Chapter.

2. GPA and the attempt to render perceptual beliefs logically immune from doubt

According to GPA, there is an awareness of content in perceptual experience that is both (1) distinct from, and (2) the ultimate basis for the beliefs we hold about the world. If, however, this conception of givenness is to serve as a philosophically adequate basis for rejecting the idea that our beliefs about the world may be revised as EM requires, it must, we have concluded, serve to establish that beliefs inconsistent with materialism satisfy GPB. It must show that, in the sense indicated by the final definition GPB presented in the previous Chapter, such beliefs are logically immune from doubt. It would be no use if instead GPA served merely, say, to render them psychologically entrenched.

However, having now identified the role that GPA must play, it at once appears that it is inherently incapable of doing so, simply because it speaks of an awareness of content that does not in itself involve beliefs. If this is the case, there may, it seems, be no particular belief that is entailed by the occurrence of this acquaintance, and hence no contradiction involved in supposing any particular belief false while accepting the occurrence of acquaintance as in GPA. The difficulty drawn attention to here is one that others have recognised, the main difference being in the terminology used. What we have spoken of as acquaintance, Sellars, for example, refers to as the 'sensing of sense contents',[1] and Armstrong, a second philosopher who may be cited in connection with the present difficulty for GPA, speaks of 'the having of sense impressions'.[2] His contention is that the having of sense impressions will only be 'logically important' for the elaboration of perception as a source of knowledge if the having of sense impressions entailed the beliefs we hold about the world. But this entailment relation would only exist if sense impressions were analysed as involving

beliefs themselves.[3] Similarly, Sellars has argued that the sensing of sense contents will only imply knowledge of fact if it is itself 'defined in terms of ... knowledge of fact'.[4] But the whole idea of acquaintance or synonymous notions is that it is the independent court by which all beliefs about the world may be judged. The paradox is thus that the requirement of independence precludes acquaintance having any logical bearing upon beliefs.

Perhaps, however, such arguments are too hasty as grounds for dismissing the possibility of acquaintance bearing logically on beliefs. All that has been ruled out by the nature of acquaintance as defined by GPA is that acquaintance may serve to render beliefs logically immune from doubt through a logical connection of the form represented by the schema, 'L(Aac⊃Kap)', where this is interpreted as reading, 'it is logically necessary that if an individual a is acquainted with content c (Aac), then a knows that p, (Kap)'. This is certainly incompatible with GPA, for it presents the knowledge that proposition p is the case as, in effect, an analytic consequence of acquaintance; but then to have such knowledge presupposes holding the belief that p, which means that the belief that p is itself an analytic consequence of acquaintance - in other words, part of the analysis of what acquaintance is - and this clearly contradicts GPA. But there is another way of connecting acquaintance and beliefs so as to constitute the latter knowledge, and indeed logically immune from doubt, one that takes its inspiration from Russell, according to whom, 'we may say that a truth is self-evident, in the first and most absolute sense, when we have acquaintance with the fact that corresponds to the truth'.[5] What is envisaged here is, in effect, that a belief may be rendered indubitable when that belief is conjoined with the appropriate acquaintance. Understanding indubitability as logical immunity from doubt as in GPA, this latter idea may be represented by the following schema: L(Bap & Aac⊃Kap), which is to be interpreted as the claim that it is logically necessary that if a believes that p (Bap), and is acquainted with content c,

(Aac), then a knows that p (Kap).

This latter way of proceeding has the advantage, first, that it does not necessitate, contrary to GPA, that acquaintance itself be belief-laden; acquaintance is, rather, the additional element that constitutes beliefs knowledge. And, second, it accords well with the idea that acquaintance is the court to which beliefs are submitted. The question then is whether a suitable argument may be forthcoming that, as a matter of logical necessity, if certain beliefs are held in conjunction with acquaintance then those beliefs are constituted knowledge. A suggestion for such an argument will be presented in the next Section.

3. An argument connecting GPA and GPB

What, to begin with, is required is the assumption that, in general, if we believe something to be the case, or hold some proposition true, then we know what it is we are holding true, the content of our belief. This appears beyond controversy in the light of the observation in the previous Chapter that it seems a presupposition of rational discourse that people, in general, be admitted to hold the beliefs that they think they hold. Next, assumptions need to be made that relate knowledge of the content of a belief, first, to knowledge of the conditions that must obtain if the belief in question is to be true, and, second, to acquaintance. Here, it is also a matter of little controversy that if we are to know the content of our belief when we believe something to be the case, we know what must obtain if what we believe to be the case is in fact true. We must, in other words, know the truth conditions of our belief. Next, a matter of more controversy, as we shall see, the connection with acquaintance may be introduced by adding that our knowledge of what must be the case if what we believe to be true is true, is a matter of knowing what content of acquaintance would, if presented, render the belief true. Thus we now have knowledge of the content of a belief construed as knowledge of its truth conditions, and knowledge of these construed as knowledge of what content acquaintance would render the

belief true.

Now, if these assumptions are accepted, it would seem to follow logically that if we hold a particular belief, and therefore know its content, and hence the content of acquaintance that would render it true, and if, additionally, we are acquainted with that very content, then we also know that the belief is true. For, to know the content of acquaintance that would render a belief true, implies the ability to know that the belief is rendered true when we are acquainted with that content. If we did not have this ability we would not, after all, know the content that would render the belief true. Thus it is a contradiction to suppose we know the content of a belief and not, given the appropriate acquaintance, understood in the above terms, know also that the belief is true. The situation is thus that if individual a holds the belief that p, and is acquainted with content c, the content he knows renders the proposition represented by 'p' true through his knowledge of the content of his belief, then he also knows that p, i.e., Kap. Thus there appears to be a means of satisfying the formula 'L(Bap & Aac⊃Kap)'.

Further consideration of this argument may be assisted by a summary of its stages, which are as follows:

(1) It is assumed that, in general, if someone holds a certain belief then they know the content of that belief - what they are holding to be the case.

(2) Knowledge of the content of a belief consists in knowing what must be the case if the belief is true, its truth conditions.

(3) Knowledge of the truth conditions of a belief is a matter of knowing the content of acquaintance which, if presented, would render the belief true, and knowledge of this implies the ability to know, when that content is presented, that the belief is rendered true.

(4) It is thus contradictory to suppose, given (1) - (3), that we hold a particular belief and do not know, given the acquaintance content that renders it true, that the belief is true (at least, in general).

The argument above is one that has deliberately avoided greater elaboration than is necessary to indicate the crucial connections that need to be made if GPA is to be a means of satisfying GPB; that is, if acquaintance is to render beliefs logically immune from doubt, in accordance with the formula 'L(Bap & Aac∋Kap)'. In particular, nothing has been said as to how precisely knowledge of the truth conditions of a belief is to be analysed in terms of knowledge of the content of perceptual acquaintance that would render the belief true, or indeed about what 'rendering true' consists in. The plausibility of the argument is dependent on a satisfactory treatment of these issues. In attempting to provide one, as a prelude to an evaluation of the argument, we, however, confront a divergence in philosophical opinion over the role of language in the explanation of belief, to which Armstrong[6] has drawn particular attention. Thus, on the one hand, it may be argued that knowledge of the content of a belief about the world consists in knowledge of the truth conditions of a sentence. If this view is taken, there is a theory of linguistic meaning that is perfectly tailored to the idea that knowledge of the truth conditions of a sentence is a matter of knowing the content of acquaintance that would render it true, namely, Russell's 'logical atomism'.[7] According to this, the basic meaning determining elements in a sentence, aside from logical operators like 'not', 'or' and 'some', are terms whose function is to label ultimate constituents of reality as presented in acquaintance. Among such constituents, Russell instances 'little patches of colour, sounds, momentary things'.[8] The meaning of descriptive sentences, when fully analysed, is then conceived as involving arrangements of these terms which form representations of a possible arrangement of constituents of acquaintance that the terms in question are known to label, so that a given sentence is known to be true if constituents of acquaintance are arranged as they are represented to be by the arrangement of terms in that sentence.

However, although it might be granted that an account along these lines could serve for a linguistic rendering of knowledge of the content of a belief, not all philosophers would, it seems, emphasise the need to construe knowledge of the content of a belief in terms of knowledge of the truth conditions of a sentence. Certainly, such emphasis is not to be expected among philosophers who, like Armstrong, deny that the holding of a belief presupposes linguistic representation, a denial for which there is some justification.[9] The latter philosopher has, of course, given a non-linguistic account of beliefs in the context of perceptual experience, ultimately in terms of capacities for discriminatory behaviour, and sees such capacities as representations of the world, for those capacities are such that they may or may not correspond to differences that actually exist among objects. Indeed, Armstrong has in fact presented a view of beliefs in which they have basic elements which are analogous to the basic labelling terms of logical atomism, the difference being that they are non-linguistic and do not stand for contents of acquaintance.[10] It is, however, evident that this sort of view could be adopted so that the basic non-linguistic representational elements in beliefs do stand for contents of acquaintance, and the knowledge that a belief is rendered true is then a matter of knowing that constituents of acquaintance are arranged as they are represented to be by the arrangement of non-linguistic constituents in the belief in question.

Being now confronted with a choice as to how knowing the truth conditions of a belief is to be explained, assuming that the non-linguistic option is a valid one, it may be asked whether the purposes of the argument specifically require that one or other of the indicated options be taken. Prima facie, it would appear that a linguistic rendering is required since EM, which is what it is to be directed against, consists of a body of statements and hence is only opposed by other contradictory statements. But then someone who shared Armstrong's view that beliefs of any degree of complexity could, in principle, be held without recourse to language,[11] might respond that the statements of EM may be viewed as

the expressions of beliefs that may conceivably be held at a non-linguistic level and correspondingly open to refutation at that level. However, although perhaps non-linguistic representation is not inconceivable in relation to the beliefs constituting EM, it is, to say the least, far fetched. In any event, for the purposes of criticism, it is not necessary to arbitrate between content of beliefs conceived in terms of linguistic or non-linguistic representations, since it is not the manner of representation that is crucial, as shall become apparent in what follows.

4. Criticisms considered

The first criticism that might be raised against the argument presented in the previous Section is that it has not been shown specifically that beliefs which contradict EM are ones rendered logically immune from doubt by acquaintance. This criticism may, however, be quickly allayed, for we have seen previously that the sort of content which materialism wishes to represent as present in perceptual experience is not something that could be consciously determined as present in a non-belief-laden awareness such as acquaintance is held to be.[12] For content such as electromagnetic radiation to be present implies the presence of constituents that we can only assume to be present rather than consciously detect. Hence Russell is surely right about the sorts of things with which we could be acquainted, when he cites patches of colour - in other words, expanses of qualia - and the like as the sorts of content of acquaintance that terms may label.

Another criticism that can be made is that our four stage argument, strictly speaking, does not suffice as a proof of a logical relationship of the form 'L(Bap & Aac⊃Kap)'. The latter implies what we earlier referred to as 'type indubitability', since it says in effect that every time we hold a belief about the content of our perceptual experience and we are acquainted with the appropriate content, then our belief constitutes knowledge, and to suppose otherwise would engender a contradiction. Whereas, stage (1) asserted only that, in general, when we hold a belief (in this context, a token of some belief

type), we know the content of the belief, so there may, this implies, be occasions when it is true that Bap and Aac, but 'Kap' does not follow because we do not in that instance know the content of our belief, and stages (2) and (3) do not therefore come into play. This criticism is valid, but it does not affect the force of the argument in opposition to EM. For, as long as it may successfully be argued that there are instances when we hold a particular belief and know its content, as may be done by the earlier appeal to presuppositions of rational discourse, then the argument implies that there are tokens of beliefs contradictory of EM that acquaintance renders instances of knowledge, and a contradiction is engendered by supposing otherwise. A similar response may be made to another criticism, to the effect that it is too strong a requirement to make it a condition of knowing the content of a belief that we may do so only if, on any given occasion when we have acquaintance with the content that renders it true, we then know that the belief is true, having correctly recognised the content for what it is. Here again a qualification in the direction of token indubitability may be made, such that the claim is only that we may not be said to know the content of a belief unless there are occasions when, if confronted with the content that renders it true, we do know it to be true.

A number of more telling criticisms may be made, however, concerning the crucial idea that the content of beliefs may be explained in terms of contents of acquaintance that would render them true. In particular, it may be shown that there are many beliefs we hold about the world that may not be reduced to ones about contents of perceptual acquaintance, contents that are understood to be no more than arrangements of indefinable perceptual qualities. This account of knowing the content of beliefs thereby obliges us to regard as inadmissible large numbers of beliefs in addition to those the materialist wishes to defend, some of them indispensable ones. The present objection will be enlarged upon later when we consider whether an ostensive conception of linguistic

meaning is possible that does not posit contents of acquaintance, as specified in GPA, as the items that terms label and by virtue of which they have meaning.[13] A related criticism concerns the idea that knowledge of the content of a belief implies being able to verify it. The argument we have presented makes it a condition of knowing the content of a belief that we be able to know, given the appropriate acquaintance that the belief is thereby rendered true, which is to say we must be able to verify it. And this assumption, again, has been criticised for denying meaning to many beliefs that we hold, since they are unverifiable. The argument thus involves commitments that are susceptible to well known and widely recognised objections.[14] However, it might be asked whether further retrenchment may be made so that these criticisms are avoided but its force retained. Thus, it might be said that we need argue only that knowledge of the content of some of our beliefs is to be explained in terms of the representation of contents of acquaintance. Such a course, however, may not be pursued, since GPA insists that the ultimate reason for accepting beliefs about the world is acquaintance, so that beliefs that do not derive their ultimate justification from this are not ones for which, in the final analysis, there is any reason to accept. If there were other such ultimate reasons besides acquaintance it might, moreover, be that beliefs based on acquaintance are contradicted, or over-ruled even, by ones otherwise justified.

If these criticisms were not serious enough in themselves, there is another which surely puts the argument beyond redemption; namely, that it is inconsistent on its own terms. This is because the idea that we be able to know, given the appropriate acquaintance, that a particular belief that we hold is true, depends upon our acquaintance with content being itself a belief-laden occurrence, and not, as GPA insists, something that is free of any intrinsic involvement of beliefs. For, in order to know that a particular belief is true we have to know,

for a start, that the representative constituents of the belief stand for elements in the state of affairs that we are actually acquainted with. Thus, each particular element in the state of affairs must feature in our awareness so that we are aware that it is or is not the sort of element that, say, a particular term stands for. Our experience of content in acquaintance may, then, only provide a knowledge of whether or not a belief is true if that experience involves the classification of that content on the latter basis, and hence beliefs about it.

5. GPA provides no basis for GPB

What we have now discovered is that the alternative means whereby GPA might have provided a logical guarantee for beliefs, through a logical relationship of the general pattern, 'L(Bap & Aac⊃Kap)', appears no more successful than the earlier pattern 'L(Aac⊃Kap)'. For, it has emerged that if acquaintance is to be matched against belief for the purpose of determining the truth of the latter, then acquaintance must be conceived as 'classificatory consciousness', to use Sellars' expression,[15] whereby the content is experienced as of a particular sort. But, of course, if acquaintance is conceived as classificatory consciousness, GPA is contradicted, since this defines acquaintance as something not itself belief-laden.

It might, though, be objected that it is wrong to dismiss the possibility of GPA rendering beliefs logically immune from doubt purely on the basis of the failure of one argument attempting to establish a logical relationship of the form 'L(Bap & Aac⊃Kap)', and the prior rejection of the alternative form, 'L(Aac⊃Kap)'. For, while these forms of logical relationship appear the only ways acquaintance may offer such an immunity, and it is certainly true that acquaintance may not, consistently with GPA, be said of itself to entail the possession of true belief, there still might be some other way of furnishing an argument in favour of the first form than the one we have considered. The problem with that argument was that it involved the idea that acquaintance must enable us to verify a

particular belief, or, in other words, enable us to tell that it was true. It was for that reason that, for the argument to work, acquaintance had to involve our being aware of content as of a particular sort and hence had, in contradiction of GPA, to be belief-laden, classificatory, consciousness. The answer, then, is to present an argument for a relationship of the form 'L(Bap & Aac⊃Kap)' that does not depend upon our being able to verify our belief p on the basis of our acquaintance with c.

Unfortunately, however, it is not clear, within the terms of GPA and the requirement of an argument of this form, that the role of acquaintance may be anything other than that of enabling us to verify a belief we hold. To begin with, it may hardly be claimed that a particular content of acquaintance is such that, if it is had in conjunction with the holding of a certain belief, it logically follows that that belief constitutes knowledge, unless that acquaintance rendered the belief true. Moreover, the role of acquaintance as a basis for belief is supposed to be one that is consciously accessible. It makes little sense to talk about acquaintance as an unconscious foundation of belief - indeed, this directly contradicts GPA which defines perceptual acquaintance as an awareness of content that provides the basis for the beliefs we hold about the world. Thus, the connection between acquaintance and belief must be made through its enabling us consciously to verify the belief in question, and hence there is no escape from the criticism we have made to the effect that such verification presupposes that acquaintance be classificatory consciousness.

We are thus able to conclude that if there is such a thing as perceptual acquaintance as defined in GPA, it imposes no logical restriction over the beliefs we may apply to the content of perceptual experience, and a means of showing beliefs that contradict EM to be ones satisfying GPB must be sought elsewhere by those who wish to provide a once and for all refutation of that theory. However, there is a still more fundamental criticism of GPA which shall be presented in the next

Section, and that is that there may in fact be no awareness of content in perceptual experience that is not belief-laden.

6. The awareness of content without classification is impossible

GPA holds that there may be an awareness of content in perceptual experience that does not require the presence of beliefs about that content, or classification of it, as a condition for the occurrence of that awareness. However, doubts may be raised over whether any sense attaches to the supposition that there may be an awareness of content which is not the awareness of it as of some sort or other. These doubts may be introduced by reference to the notion of acquaintance with a quale, for previous consideration has suggested that qualia are givens of perceptual acquaintance if anything is.

It is tempting to suppose that there is nothing more to experiencing a quale than a direct sensory confrontation, the thing merely stands before consciousness, as it were, and that is all there is to experiencing one. But many things may stand before consciousness without being a particular quale, so the question arises as to what makes acquaintance with one quale consciously different to acquaintance with another quale or any other sort of thing. Here the obvious answer is that, quite simply, the difference is a matter of different contents being presented to consciousness. However, there is reason to doubt the adequacy of this response. For, if our awareness is to be specifically that of what we are presented with if we are indeed presented with a certain quale, then it may be argued that, by virtue of what qualia are conceived to be, there must be certain ideas present in that awareness in addition to the bare sensory confrontation that GPA envisages. This is because, for one thing, by a quale is understood a recurrent feature of experience that may characterise different spatial particulars at one and the same time, and also continue to characterise them or other particulars at different times. If, also, our experience is to be as of a particular quale, such as the quale of red, the idea needs to be present that we are experiencing

that quale rather than some other that might have been presented. The content presented has, in other words, to be classified within the quality space of colour qualia. In the absence of these ideas, our experience might just as well be of something other than a quale, since no account will have been taken of characteristics that differentiate a particular quale as a content of experience; we could not be said to be aware of the specific nature of the content of our experience.

Acquaintance, it thus appears, does not allow room for us to be aware specifically even of qualia, items that were thought to be givens of acquaintance if any are, for while a quale may be the thing presented in a given case, we may not, without the presence of the necessary beliefs as to its nature, be aware of it as the thing it is rather than anything else. Indeed, it would appear that without recourse to conceptualisation, classification, or the presence of beliefs as to the nature of the content presented - all of which are prohibited within the terms of GPA - the awareness of content in perceptual acquaintance would have to be completely non-specific, effectively an awareness of 'something here now'; but even this places an illicit dependence upon classification and belief - if we are to be aware of something present we have to have in mind the idea of the contrasting case of nothing being present. Similarly, 'here' and 'now' are essentially contrastive with other places and times. These reflections thus suggest that even a quite non-specific awareness of content is inconsistent with the insistance that the awareness is not belief-laden, but if this is the case, then GPA is itself inconsistent in postulating an awareness of content that is not belief-laden.

The criticism that we have now presented of the idea of perceptual acquaintance as something uncontaminated by beliefs, classification, or concepts - principles of sorting, is by no means original, having been associated in various forms with a number of famous philosophers of the past. Hegel, for example, criticises the notion of 'sense certainty',[16]

the idea that by making no attempt to order or classify the content of experience, a direct awareness of that content 'exactly as it is'[17] may be obtained. Prior to Hegel, Kant was similarly emphatic as to the impossibility of experience independent of the deployment of concepts and classifications. As he puts it, 'intuitions without concepts are blind'[18] - that is, there may be no awareness of content without the application of concepts as determining what that content is experienced as being.

At this point, the question naturally arises as to why, if the sort of criticisms we have presented of the idea of a non-classificatory awareness of content are so compelling and of such long standing, it should ever have been thought in recent times, and in particular by Russell, that there should be such a thing. Part of the explanation might be suggested to lie in Russell's rejection of Hegelian philosophy,[19] something which has, of course, no bearing on the validity of the arguments we have presented; but, more importantly, Russell's conception of the sort of thing that may feature in acquaintance does in fact oppose the claim that the awareness of a quale as a specific content of experience presupposes classification. For, we have argued that a quale is understood as a recurrent feature of experience that may characterise various different spatial particulars - it is, in other words, a universal - and, according to Russell, among the things we know by acquaintance are universals.[20] It needs to be asked, therefore, whether this alternative view may be sustained.

Russell explains how we become acquainted with universals in perceptual experience by considering the case of whiteness, what we would call the quale of white. He argues that:

> When we see a white patch, we are acquainted, in the first instance, with a particular patch; but by seeing many white patches, we easily learn to abstract the whiteness which they all have in common, and in learning to do this we are learning to be acquainted with whiteness.[21]

According to Russell, then, we come to apprehend the quale of white purely on the basis of encounters with white things, rather than through a contrastive system of classification or quality space that has to exist and be applied for any such awareness to be had. We become able to experience this universal by abstracting it, perceiving it as common to various perceptual presentations. Does this, then, constitute a means of avoiding the problems to which we have drawn attention?

The idea of abstraction as the source of knowledge of recurrent features of experience, and of the referents of general terms, is a familiar one within philosophy.[22] By this means, awareness of specific content within perceptual experience may, it seems, be explained without recourse to pre-existing concepts whose valid application to the content of experience may always be challenged. Abstractionism has, however, itself been the subject of long-standing criticism.[23] The first problem about our supposed ability, in the absence of concepts, to perceive common constituents of different perceptual presentations is that, from a logical point of view, there is no necessity that a particular quality should be focussed on as recurring in various particular presentations, for there will always be a whole variety of common features that may conceivably be displayed by the items concerned. Whiteness will only be abstracted from encounters with white things, then, if we are pre-disposed to focus upon that common feature in particular, which in turn implies a pre-existing scheme for classifying objects. Then again, the process of abstraction which Russell postulates involves developing an awareness of whiteness as something that recurs in the various temporally separated encounters with white things, and this awareness itself presupposes our having the idea that the content we are now presented with is one that we have previously encountered, so that the explanation of acquaintance with universals in terms of abstraction again involves the very belief-laden consciousness that the appeal to abstraction is intended to avoid.

Abstractionism, on the lines suggested, does not, therefore, provide a means of explaining how awareness specifically of qualia, the most basic candidates for givens of acquaintance, may be had without the involvement of beliefs, and in the absence of any other suggestion, it must be concluded that the criticisms presented above stand, and the idea of an awareness of content not involving beliefs as a condition of its occurrence must be rejected.

7. Implications of the refutation of GPA

The conclusion has now been reached that one of the main avenues of givenness, the Givenness of Perceptual Acquaintance, is indeed a myth, a notion that does not withstand critical examination. It is, in other words, a mistake to postulate an awareness of content in perceptual experience that is both distinct from beliefs, in the sense of not requiring them as conditions for its occurrence, and the ultimate basis for our beliefs about the world. Just this conception of givenness was earlier found to underlie criticisms of EM made by Bernstein and Cornman, and also Rorty's rejection of these criticisms on the ground that it is false to suppose that awareness comes first and descriptions, and, by implication, beliefs, are framed in the light of that initial awareness. We have recently found Rorty is correct here, since the whole idea of a specific awareness of content without the application of classifications, and hence beliefs as to its nature, is unsustainable. Previously, we found that GPA could not serve as the ultimate basis for beliefs in the way required for a philosophical refutation of EM, in that it could not render beliefs contradicting that theory logically immune from doubt. GPA failed, in other words, to establish that such beliefs satisfy GPB. All this means that opposition to EM must proceed differently to what it has tended to do, placing a heavy reliance upon GPA. Other means must be found to show that beliefs contradicting EM satisfy GPB.

The rejection of GPA has, however, wider implications than those so far identified. GPA is the embodiment of the Acquaintance Analysis

of perceptual experience, and insofar as GPA is unsustainable, that Analysis fails also. What specifically is impugned by the refutation of GPA are the Acquaintance Analysis propositions A2, and A4. The first of these supposed that the awareness of content in perceptual experience is non-belief-laden, while A4 supposed that beliefs were not constituent elements of perceptual experience but consequences of it. If, however, perceptual experience is to be the awareness of content at all, at least insofar as awareness of content is to be anything other than totally non-specific, it has been shown that beliefs must be constituents of that very awareness. Proposition A1 of the Acquaintance Analysis, by contrast, is not impugned by the refutation of GPA. It is still possible to claim that there is a specific awareness of content in all perceptual experiences, as envisaged by that proposition; the difference is that beliefs, or the application of classifications to the content presented, will inevitably be a condition of the occurrence of such awareness. Finally, proposition A3, which said that acquaintance constitutes our ultimate reason for holding the beliefs we do about the world, must, like A1, be rejected if acquaintance is construed as in the Acquaintance Analysis by reference to A2 and A4, but not necessarily if it is admitted to be a belief-laden episode. Then the claim would be, in effect, that there is a belief-laden awareness of content that is the means by which we determine what other beliefs to hold about the world. This is itself a controversial contention and one that will be further discussed later,[24] but the point for the present is that it is not excluded by the refutation of GPA.

A further ramification of this refutation is in relation to CSO. In our consideration of the Analytical Approach and specifically the accounts of perceptual experience that fall within it, it was found that commonsense suggested that to account fully for the differences between the perceptual episode involved in chicken sexing and ordinary perceptual experience that make the former so peculiar, only the

Acquaintance Analysis would do. But, since the refutation of GPA means the Acquaintance Analaysis, as constituted by propositions A1-A4, cannot be retained, nor, similarly, may the commonsense intuitions about the chicken sexing case from which the latter inference is drawn. What, specifically, has to be rejected is the intuition that the difference between the two cases is that in ordinary perceptual experience the awareness of the world comes first, and any beliefs acquired follow this, whereas in the chicken sexing case there is no such initial awareness. Belief acquisition, a notion which encompasses the application of classifications to content, must, contrary to this view, be integral to the awareness of the world. Commonsense, it can be said, appears committed to a naive empiricism that has all beliefs about the world based upon experience of it, when in fact certain beliefs cannot be based upon such experience, in principle: namely, those through which we are able to experience the world at all. None of this is, however, to imply that commonsense is mistaken in insisting that the chicken sexing case is profoundly different from ordinary perceptual experiences. That the former strikes us as odd, and even as evidence of unconscious mental events, is strong grounds for supposing such a difference, and later on the question of how, in the light of the refutation of GPA, the difference should be explained will be addressed. This will be in connection with the presentation of a final account of perceptual experience as something consistent with the truth of materialism, an account in which A1 is retained.

A final question that may at this stage be raised, following the refutation of GPA, concerns the status of qualia. Quite simply, it may be asked whether the consequent rejection of the Acquaintance Analysis does not mean there are no such things as qualia, since these were supposed to be known by acquaintance and their entire raison d'etre was the need to take account of what is given in acquaintance. However, referring back to the specification of qualia provided in Chapter 2,

it is evident that their claim to recognition does not presuppose the Acquaintance Analysis. The crucial claim was that qualia are indefinable or unanalysable so far as their intrinsic nature is concerned, with the consequence that this nature may be known only through experiencing it. The claim was not, therefore, that, specifically, they may only be known through a non-belief-laden awareness. If, therefore, it is possible to retain the awareness of such intrinsically indefinable qualities through a belief-laden awareness, then the rejection of GPA does not imply the rejection of qualia. For the intrinsic nature of qualia to remain beyond verbal specification, though, the beliefs or classifications by which the awareness of that nature is had must be independent of language. They must, in other words, be non-linguistic. Qualia may thus only be retained given a commitment to non-linguistic beliefs. And, even if the extremes to which Armstrong takes this notion are quite implausible, as was previously indicated, some such commitment is defensible on a number of grounds. For one thing, given that all perceptual experience, qua the experience of content, presupposes classification, if we deny the possibility of non-linguistic classification, we are forced into the extreme position of denying perceptual experience to any creatures that lack the command of language. Such beliefs were, of course, similarly required for the Belief Analysis of perceptual experience, and were indeed a relatively uncontroversial element in that account. It may also be argued that, given the way we in fact learn language, non-linguistic classifications are again required. For example, if a child is to be able to learn the term 'red', then as Quine puts it,

> He must, so to speak, sense more resemblance between some stimulations than between others or else reinforcement of the word 'red' in face of red objects would no more encourage the same response to a thirteenth red thing than to a blue one... (Therefore, we must) credit the child with a sort of pre-

linguistic quality space.[25]

These points will be returned to later.

To sum up, then, the implications of the refutation of GPA are that:

(1) The attempt to establish that beliefs inconsistent with materialism satisfy GPB must be made other than by appeal to GPA, and Rorty is right to reject criticisms of EM that appeal to it.

(2) The Acquaintance Analysis is, likewise, refuted, in particular, because A2 and A4 may no longer be retained; another account must be provided of perceptual experience.

(3) The difference between perceptual episodes like the chicken sexing case and ordinary perceptual experience, contrary to common-sense intuitions, must be explained other than by reference to the Acquaintance Analysis.

(4) It is still possible to claim the existence of qualia as items whose intrinsic nature is indefinable and knowable through experience only, but it is necessary to postulate non-linguistic classifications as mediating their experience.

In the immediately following Chapters, the first of these points will be pursued, the concern being to discover whether alternative means are forthcoming by which beliefs contradicting materialism may be shown to satisfy GPB. In the next Chapter, a beginning is made by asking whether such beliefs may be deemed 'inherently indubitable' in accordance with the previously encountered formula 'L(Bap⊃p)'.

CHAPTER 8

## A refutation of the thesis of inherently indubitable beliefs

### 1. Summary of Chapter

An inherently indubitable belief is identified as one where the very holding of the belief logically entails its truth. It is, in other words, logically necessary that if the belief is held then the belief is true. It is first argued by reference to parallel cases, such as the logical necessity that if something is a triangle it has three sides, that the form of logical necessity involved in supposing there to be inherently indubitable beliefs is one deriving from the conditions governing the application of concepts. An account of the concept of pain, as it features in introspective reports and judgements, that is offered by K. Baier is then considered. Its importance is that it suggests that the concept of pain does confer inherent indubitability upon first person pain judgements, thereby rendering beliefs that contradict materialism logically immune from doubt. The crucial element in Baier's account is the claim that it makes no sense, or is self-contradictory, to say 'I have a pain unless I am mistaken', which he presents in support of the idea that pains are, in a special sense, private. Its use in support of inherent indubitability is referred to as the 'Privacy Proof', and this proof is criticised on grounds that provide a general refutation of the notion. These are: (1) no ontological conclusion may be drawn from consideration of what the conditions governing the application of a concept are, for these only indicate what must be the case if something of the sort in question is to exist, and, (2) the conditions ascribed to the concept of pain, as applying to first person judgements, by the Privacy Proof, preclude such judgements being cases of factual knowledge. In conclusion, doubt is raised over whether our existing concept of pain is in fact committed to inherent indubitability.

2. Inherent indubitability and the conditions governing concepts

In Chapter 6 it was observed that the usual representation of the notion of indubitable belief appealing to logical necessity, is one that holds that a belief is indubitable given that it is logically necessary that if a person holds that belief then the belief is true, or, in symbols, L(Bap⊃p). This may be equivalently expressed by saying that it is logically impossible, that is, self-contradictory, to suppose that the belief concerned may be held and yet fail to be true - L~(Bap &~p). It is appropriate to refer to this rendering of indubitability as 'inherent indubitability' since, rather than appealing to anything else, such as acquaintance, in the attempt to render a belief logically immune from doubt, it maintains that the very fact of holding a given belief can provide such an immunity. The question, then, is whether any beliefs may be said to be inherently indubitable, and in particular, ones whose truth would refute EM. In order to answer this, it must, however, first be decided how the holding of a belief may logically imply its own truth.

We may begin by considering some parallel cases of logical necessity. It is logically necessary, so it appears,[1] that if something is a triangle then it has three sides, and similarly, that if something is coloured then it is spatially extended; it is likewise self-contradictory to suppose, respectively, that something may be a triangle and not three-sided, or coloured and not spatially extended. These necessities and the corresponding self-contradictions derive, moreover, from the concepts involved, the conditions that are set for something to be classified as a triangle or as coloured. It is self-contradictory to suppose there may be a triangle without three sides because, in supposing there to be a triangle we are, by the terms of the concept, supposing something that has three sides. If, therefore, it is the conditions governing concepts that yield these latter logical necessities and self-contradictions, then it is evident that, analogously, it is the concepts involved that must be addressed in seeking to determine whether there are any inherently

indubitable beliefs.

3. Baier on the logic of first person sensation reports

Given, then, that inherent indubitability must derive from the concepts involved in the beliefs concerned, the question of crucial importance for opposition to EM is whether the concepts involved in beliefs, that would, if true, refute that theory, yield this sort of indubitability. The basis for an affirmative answer here appears, moreover, to be provided by an account of first person sensation reports presented by K. Baier in an article entitled 'Smart on sensations', which has received considerable attention as a purported refutation of materialism. It is appropriate, therefore, to approach the matter through a consideration of some of his contentions.

In his article, Baier sought to show that 'introspective reports are necessarily about something private',[2] so refuting a claim made by Smart, and also the version of EM that we have adopted here, that reports of we make of our own sensations may be about certain public phenomena, namely, patterns of cell firing.[3] They are about something private in a special sense of the term which he elaborates by means of a number of propositions indicating allegedly necessary truths about pain, which he takes as an example. Among these are the propositions that what is reported when someone says 'I am in pain' is something that is 'necessarily owned', in the sense of being felt or experienced by someone, 'for it would be self-contradictory to assert the existence of unfelt pains';[4] and also 'necessarily imperceptible by the senses, for it makes no sense to say that someone saw, heard, smelled, touched or tasted his or anyone else's pain';[5] but, most importantly, 'it is something about which the person whose private state it is has final epistemological authority, for it does not make sense to say 'I have a pain unless I am mistaken''.[6]

With regard to these propositions, it would appear, first, that Baier is talking loosely in describing pain as something that is necessarily

felt, for there is no contradiction in supposing that pain might never have been felt by anyone; it might have turned out that there were no such things as pains to be felt. Properly interpreted, the claim being made is that, necessarily, if something is a pain then it is experienced by someone. Also, the appeal to self-contradiction in supporting this proposition indicates that the necessity claimed is intended to be logical necessity, and to this extent, the sort of argument Baier is presenting is in close conformity with the logical necessities mentioned in the previous Section. In the case of the claim that pain is 'necessarily imperceptible by the senses', as contrasted with the claim that pain is necessarily felt, the supporting contention refers to what 'it makes no sense to say' rather than what is 'self-contradictory', but since no distinction is drawn between the force of the necessity claimed in this instance as compared to the other, it may be inferred again that logical necessity is being invoked. This brings us to the proposition about pain being something about which the person whose private state it is has 'final epistemological authority', which Baier supports by the claim that 'It makes no sense to say 'I have a pain unless I am mistaken''. Now, it would be consistent with his previous contentions to infer from this latter claim the proposition that pain is something we are 'necessarily right in our judgements about', at least in our own case, and moreover that this be a matter of logical necessity. In other words, it is logically necessary that if we believe we are in pain then we are in pain. Thus it is proved that the belief that we are in pain is inherently indubitable, and, as such, also type indubitable, for if it is to make no sense to say 'I am in pain unless I am mistaken', then no occasion may be permitted when it might be the case that I was mistaken in my belief, since otherwise the latter surely would make sense.

It should be noted that Baier wishes, in fact, to deny that his account of pain, or more correctly, the concept of pain, as that of

something private commits him to 'incorrigibility'. Mistakes are always possible even with introspective judgements, but the person making them, he adds, is 'necessarily in the best position to discover his mistake',[7] and it is 'inconceivable' that such judgements could be overturned on the basis of any public observations, say, of brain cell firing.[8] This doctrine is what has been referred to as that of 'logically priviledged access',[9] and in subscribing to it, Baier would seem to want to say both that it makes no sense to say 'I am in pain unless I am mistaken', but does make sense to say 'I am in pain unless I decide I am mistaken', two propositions of doubtful mutual consistency. Taken as they stand, the propositions of Baier's which we have quoted jointly imply beliefs that are inherently type indubitable, and will accordingly be treated as such. Since this implication results from propositions intended to expound a special sense of 'privacy', we may refer to the 'Privacy Proof' of indubitability when referring to the argument we have obtained from them, which of course depends essentially on the proposition that it makes no sense to say 'I have a pain unless I am mistaken'.

Now, prior to any evaluation of the Privacy Proof, it may be asked whether it in fact proves enough, assuming it to be valid. Being necessarily right in judgements about when we are in pain does not imply, at least without further argument, being right in the belief that what is presented to us is a quale, a simple, homogeneous, constituent of reality whose nature is only revealed through experience, and of which the physical sciences make no mention, so it may be questioned how far such indubitability opposes materialism. Baier's own answer to this is to say that the fact that the concept of pain refers to something private, as specified by his propositions, shows that the subject matter concerned may not be something physical.[10] Of no physical phenomenon may it be said that it makes no sense to say that we may be mistaken in our judgements as to its presence; indeed, no physical phenomenon, likewise, is the subject of logically privileged access, so this

alternative would itself do as a basis for opposing materialism, and more will be said about this later, in the light of our criticism of the stronger notion of indubitability. These latter lines of objection were in fact anticipated in Chapter 2,[11] and are also taken seriously by Armstrong[12] as criticisms of any defence of materialism. There is, however, a convergence between the Privacy Proof and the idea that pains have intrinsically non-physical qualities, for we identify contents of perceptual experience like pains on the basis of the qualities they present, and if we misjudged those we would accordingly misjudge what was present, which would then allow us to believe ourselves to be in pain and not in fact be in pain, in contradication of that Proof. Type indubitability hence implies our being right in our judgement as to the quality present in judging ourselves to be in pain.

4. The conditions governing a concept are not necessarily satisfied

The task now is to determine whether an argument along the lines of the Privacy Proof does indeed allow it to be claimed that certain beliefs that we occasionally hold, such as the belief that we are in pain, are inherently type indubitable. This proof proceeded by interpreting Baier's proposition that 'it makes no sense to say 'I have a pain unless I am mistaken'', in accordance with his use of other ones of that form as support for alledged logical necessities, to obtain the proposition that it is logically necessary that if a person believes himself to be in pain then he is in pain. Such appeals to logical necessity and self-contradiction were, moreover, previously shown to derive their force from the conditions governing particular concepts, and likewise where talk of what makes no sense is treated as equivalent to self-contradiction. Thus, what, in the final analysis, the claim that it is logically necessary that if a person believes himself to be in pain then he is in pain shows, is simply that it is a condition of his actually believing himself to be in pain that he is in fact in pain, just as the claim that it is logically necessary that if something is a triangle then it has three sides shows that it is a condition of something's being a triangle that it have three

sides. Viewed in these terms, however, the Privacy Proof appears rather trivial, for all that it shows is that in order to establish that someone does believe themself to be in pain, it must also be established that they are in pain, when the intention was to be able to infer the truth of their being in pain, and therefore experiencing something non-physical, from the separately established fact of their believing this.

It might be responded here that it is obvious that people do believe themselves to be in pain. Did we not say in Chapter 6 that a general scepticism about whether people actually hold the beliefs they claim to hold negates a presupposition of rational discourse? However, these strictures may be opposed, in the present case, because what is being supposed - that it is a condition of the holding of a belief that the belief be true - is quite contrary to the general rule, which is for no such requirement to be made. It is quite compatible, therefore, with the rejection of a general scepticism about people holding the beliefs they think they do, to claim that the unusual sort of belief that the Baier analysis of the concept of pain entails is not one that is ever in fact instantiated, although people might of course think that it is.

When it is thus made apparent that the appeal to logical necessity in the Privacy Proof, like all arguments seeking to prove a claim of the general form 'L(A⊃B)', reduces to an appeal to the conditions governing the application of a concept, some explanation is called for as to how the error could have arisen of supposing that any positive ontological conclusions about what there is in the world could have been drawn from such reasoning, as was the case with Baier's own conclusion that reports of pain <u>are</u> reports of something non-physical. For, as we have seen, reflection on the conditions governing a concept does not entitle the conclusion to be drawn that those conditions are satisfied. Our concept of pain may lead us to think we are reporting something such that the very fact

we believe we are in pain renders our belief true, and something intrinsically non-physical, but that does not entail that we are in fact doing so. The source of the error seems to be the misleading way in which Baier expresses the logical necessities which he claims to have identified, as when it is claimed that pain is necessarily owned or felt. This appears to state that the experience of pain is an inescapable fact, rather than the conditional necessity that if something is a pain then it is experienced, which is all his argument entitles him to say. The most famous instance of this sort of misleading statement of a conditional necessity giving the appearance of a profound ontological conclusion is in the Ontological Argument, where reflection on the concept of God gives rise to the conclusion that for something to be God it must exist, and this is expressed by saying God necessarily exists.[13]

The objection raised here against the Privacy Proof, which is that, like Baier's own argument, it makes an illicit transition from conclusions about the conditions governing a concept to a positive conclusion about what exists, indicates a quite general criticism of inherent indubitability. For, given that logical necessity in the context of a proof of a claim of the form 'L(A⊃B)', of which 'L(Bap⊃p)' is an example, is, as has been shown, a matter of the conditions governing the application of concepts, the separate task of showing that the required conditions are satisfied has always to be conducted before we are entitled to draw any ontological conclusion. But, this being the case, as we have said, the purpose of providing such a proof is defeated, for it was intended of itself to yield ontological conclusions. Whether, moreover, the concept of pain is claimed to be such that, by logical necessity, if we believe we are in pain then we are in pain, or the more modest conceptual requirement of 'logically privileged access' is alleged, where the person judging himself to be in pain is always the final authority on whether he is in fact in pain, it has still to be separately decided whether these conditions

are satisfied, so that a retrenchment to logically privileged access in place of indubitability would be of no benefit.

5. Inherent indubitability precludes knowledge of fact

There is a more radical line of criticism that may be made of inherent indubitability, as exemplified by the Privacy Proof, than that pursued so far, which is that it implies an account of the concepts involved in introspective judgements which prevents those judgements from being factual ones, and the beliefs concerned from constituting knowledge of fact. This is because knowledge of fact implies the satisfaction of two distinct conditions, aside from any others - respectively, the holding of a belief, and the belief in question's being true; whereas inherent indubitability renders those conditions identical. Failing to preserve their distinctness precludes there being any such thing as the fact of the matter, which, in itself, suffices to nullify the appeal to inherent indubitability in opposition to EM, and may in addition be said to undermine the very notions of belief and truth. These considerations serve to confirm the view of Wittgenstein, who preceded Baier in making the claim that 'it makes sense to say about other people that they doubt whether I am in pain; but not to say it about myself',[14] but, contrary to Baier, rejects the idea that this is evidence that we have final epistemological authority regarding our pains, by prefacing the latter remark with the quite contrary observation that 'It can't be said of me at all (except perhaps as a joke) that I know I am in pain'.[15]

The first task, then, is to show how the supposition that it makes no sense to say 'I have a pain unless I am mistaken', or ones like it, obliterates the distinction between someone believing something the case, Bap, and its being the case, p. In this regard, we have already seen that such claims commit us to the view that it is logically necessary that if I believe I am in pain then I am in pain, a claim conforming to the logical schema, 'L(Bap⊃p)'. This, in itself, might be thought to show that believing ourselves to be in pain and our being in pain are not distinct existences, a position supported by Hume's

Law, which maintains that no two distinct existences are necessarily connected.[16] There are, however, exceptions to this law, as Armstrong,[17] for one, has noted. For example, it is necessarily the case that if something is coloured, it is spatially extended, but this does not mean that colour and spatial extent are not distinct properties, for something may be spatially extended without being coloured. Similarly, for any substitution in the formula 'L(Bap⊃p)', it may not be inferred that the entities represented by 'Bap' and 'p' are one and the same, since it remains possible for it to be the case that p without also being the case that Bap.

There is, though, a further proposition that is implied by the claim that 'I have a pain unless I am mistaken' is senseless, which, when conjoined with the already deduced one of the form 'L(Bap⊃p)', does preclude a distinction between the entities represented by 'Bap' and 'p' in this instance. For, this claim may properly be construed as denying sense to any expression of uncertainty over whether we are in pain, and so entails that, necessarily, if we do not believe ourselves to be in pain, then we are not in pain - a proposition of the form 'L(~Bap⊃~p)'. This latter is logically equivalent to 'L(p⊃Bap)', the logical form of the thesis of 'self-intimation', according to which it is, for example, logically necessary that if we are in pain then we believe we are in pain.[18] Self-intimation moreover precludes the possibility of the entities represented by 'Bap' and 'p' being distinct on the above basis, for it is not consistent with 'L(p⊃Bap)' to hold that it may be the case that p and not Bap. What we have now is the conjunction of 'L(Bap⊃p)' and 'L(p⊃Bap)', or 'L(Bap≡ p)', which entitles us to infer that the entities represented by 'Bap' and 'p' in the present context are identical, for 'Bap' and 'p' apply, if at all, under one and the same conditions. This means, in turn, that the idea of two distinct conditions, the holding of a belief and the belief held being true, as are required in the possession of knowledge, may not be retained given the premises of the Privacy Proof of inherent indubitability.

At this stage, the temptation will be for the defender of inherent indubitability to deny that this identity of the entities represented

by 'Bap' and 'p' has any adverse consequences. Thus, he may propose to adopt a relativist view of the truth, according to which for a belief to be true is simply for it to be believed, and likewise for a belief to constitute knowledge. However, aside from any question as to the coherence of such a view, it will be of no use in opposing EM, since it makes whether there are pains, qua intrinsically non-physical entities, entirely a matter of whether a given individual believes there to be such things, and the advocate of EM could simply refuse to do so. There would be no fact of the matter to argue over, but instead as many 'facts of the matter' as there were divergent beliefs. In addition, it is not clear that the conclusion that believing something 'p' to be the case means the same as p's being the case allows any sense to remain attached to the notion of belief, or indeed truth. For, when it is said that someone believes something, this means to say they believe something to be true, or false, as the case may be. To understand what is meant by talk of believing something then implies understanding what is meant by something's being true or false, but if these are said to mean the same as, respectively, something's being believed or not believed, we are returned to the starting point in seeking to understand what is meant by believing something. The only escape from this vicious regress is to explain truth other than in terms of belief, which is debarred on the assumptions of the Privacy Proof. Truth is similarly undermined by its meaning being identical to 'believed to be true'.

It might be objected, however, that the present criticism to the effect that inherent indubitability is inconsistent with knowledge of fact, and hence a self-refuting notion, has only been made out with reference to the Privacy Proof itself, with its dependence on the assumption that mistaken first person judgements about pains and the like are senseless. There might, however, be some other way of proving that pain judgements and the like conform to 'L(Bapəp)' that does not

entail the identity of the entities represented by 'Bap' and 'p' in this context, so avoiding the present criticism. But it is hard to see how inherent indubitability may be claimed for these judgements aside from a general exclusion of the possibility of error in judgements about pains and the like (at least, in the first person), their absence as well as their presence, from which, as we saw, the identity of believing ourselves to be in pain and our being in pain follows.

6. The refutation of inherent indubitability, and our existing concept of pain

The previous two Sections provided a refutation of inherent indubitability as exemplified by the Privacy Proof, which was based on two arguments: (1) the appeal to logical necessity in any claim of the form 'L(A⊃B)' amounts to an appeal to the conditions governing the application of a concept, that represented by the term 'A', and it is a gross fallacy to think that the provision of such an argument proves that 'B' is the case. Rather, all that it shows is that for it to be true that A, it must be true that B, as with the demand that for it to be true that we believe that we are in pain, we must actually be in pain. (2) The Privacy Proof, in seeking to show that first person pain judgements conform to the schema 'L(Bap⊃p)', committed us to a general exclusion of error in relation to such judgements, from which the identity of the belief in and the fact of our being in pain followed, thereby excluding the very possibility of factual first person judgements about pain. No other means than by such a general exclusion of error seems available to render such judgements inherently indubitable, so the failure of the Privacy Proof here points also to a general failure of inherent indubitability.

But before leaving inherent indubitability, it is necessary to consider further whether our existing concept of pain does exclude the possibility of error in first person judgements, as is implied by the central claim of the Privacy Proof that it makes no sense to say 'I have a pain unless I am mistaken'. For, the consequence is, as we have seen,

that statements such as 'I am in pain' are not even putatively factual, not even putative expressions of knowledge. In the Wittgensteinian idiom, the conclusion is that the 'language game'[19] played by 'I am in pain' is not that of fact - stating discourse, but something more primitive. Perhaps, as Wittgenstein himself is sometimes thought to have held,[20] the use of that utterance is simply a replacement of natural behaviour such as crying out - a position which is certainly suggested by his own denial that it makes sense to say 'I know I am in pain'.[21] The present discussion has, by contrast, proceeded on the assumption that pains are contents of perceptual experience about which factual reports may be made in the first person as elsewhere. Moreover, few philosophers have, it seems, gone so far as to agree with the view ascribed to Wittgenstein - even Smart declines to adopt it,[22] while admitting it to be a congenial one insofar as it is in fact one way of avoiding any problem about pains for the defence of materialism. This rejection seems quite justified in that pains strike us as things we are capable of reporting as present in our experience as much as anything else.

To represent this position as one compatible with our existing concept of pain it is, of course, necessary to refute the suggestion that a rule governing that concept is indicated by the claim that it makes no sense to say 'I have a pain unless I am mistaken'. This seems by no means an impossible task, by virtue, for one thing, of the very lack of agreement as to whether there are absolutely no circumstances where it makes sense to make the latter assertion. Even Baier, as we saw, seeks to avoid being held to a literal interpretation of his remark - and with good reason, for it is highly questionable whether it can be sustained. For example, we may, on occasion, be undecided how to classify a sensation. Then, certainly, it would make sense to say 'I have a pain unless I am mistaken'. Error in judgement over the presence of pain is similarly accommodated if it is held, as seems plausible, that there can be cases

where our attention is distracted from a sensation, as where we say of some interesting or pleasurable occurrence that 'it quite took my mind off my toothache'. The latter similarly makes sense of sensations going unexperienced.

It seems, then, that the rules governing our existing concept of pain are not such that it is committed to the exclusion of error concerning the presence of pain. The doubt just raised over the existence of rules having this consequence further prompts the question whether, as philosophers who have followed the example of Quine believe, the whole notion of conceptual rules, the conditions governing the application of concepts, and the analytic 'logical necessities' they sustain, are similarly dubious.[23] They are dubious because no adequate basis exists, in their view, for showing that a proposition constitutes a rule governing the application of concepts, or an analytic truth, rather than simply describing a purported fact about the world that may ultimately be withdrawn as false like any other.[24] For Quine, 'no statement is immune to revision'[25] and, in Rorty's words, 'a necessary truth is just a statement such that nobody has given us any interesting alternatives which would lead us to question it'.[26] If these views are correct, inherent indubitability does not even proceed beyond the first stage of its articulation for the assumption needed at the outset, to the effect that logical necessities can be derived from the conditions governing the application of concepts, is invalid. The Quinean position, however, remains a matter of controversy,[27] and it is for this reason that no weight has been placed upon it here in opposing inherent indubitability.

With this, we may uow leave the notion of inherent indubitability, and turn to the other remaining suggestion as to how beliefs contradicting materialism may be rendered logically immune from doubt, namely, the use of transcendental argument.

# CHAPTER 9

## Two transcendental arguments opposing EM

### 1. Summary of Chapter

With the failure of the appeal to inherent indubitability, attention is turned to whether beliefs whose truth would refute EM may be shown logically immune from doubt by transcendental argument. As a preliminary, the earlier conclusions about the logical form of these arguments are summarised and it is shown how they do not encounter the difficulties that beset inherent indubitability. Two transcendental arguments are then considered as prima facie promising means of refuting EM. The first is referred to as the 'Possession of Knowledge Proof'. This proceeds by two stages, the first involving the argument that it must, logically, be possible to identify instances of knowledge if we are to possess knowledge, failing which we are committed to the incoherent doctrine of total scepticism. It then invokes the Empiricist foundation theory of knowledge, according to which the ability to identify and possess instances of knowledge as a whole depends on having this ability in relation to the immediate content of perceptual experience. Reasons are then provided for rejecting this argument as an adequate basis for truths incompatible with EM. Similarly subject to objection is the second proof, which appeals to the success of our existing beliefs in facilitating our dealings with the world as proof of their truth. Evidence of the success of these beliefs is provided by (1) our very survival in the world, and (2) the success of ordinary language in describing it. The observed inadequacies of both proofs suggest that transcendental argument is, after all, not an effective means of rendering indubitable beliefs of the specificity of those needed to refute EM, but this conclusion is withheld pending consideration of a further such argument that is the subject of the next Chapter.

2. Transcendental arguments and the identification of indubitable beliefs

Transcendental arguments were first introduced in Chapter 6 as proceeding in the following way: a proposition q is identified as being a logical presupposition of a proposition p, so that, formally, it is the case that $L(\sim q \supset \sim p)$; but p is then shown to be a fact whose truth is not open to dispute within rational discourse. Now, '$L(\sim q \supset \sim p)$' is logically equivalent to '$L\sim(p \& \sim q)$'. In other words, given that we are committed to the truth of p, we may not, without giving rise to a contradiction, deny q. Thus it is proven that q may no more be subject to dispute within rational discourse than p. The interest of such arguments lies in whether propositions that take the place of q in the formal schema may be ones that were previously matters of controversy as compared to the indisputable ones substituted for p, and in particular, for the present purposes, whether they may be ones that refute EM as a theory that may be rationally adopted.

The transcendental argument as a means of identifying indubitable beliefs is, moreover, not subject to the difficulties that proved to be the downfall of inherent indubitablity. For, these arose from the attempt to deduce the truth of the belief in question as an analytic consequence of its being held. Although transcendental arguments do involve an appeal to analytic truth in the relations of logical presupposition to which they appeal, as symbolised by the formula '$L(\sim q \supset \sim p)$', the other essential element is not the fact of a proposition's being <u>believed</u>, but the ability to demonstrate that a proposition is true beyond dispute within rational discourse. This difference does not of course mean that transcendental arguments are any more able to refute EM than was the appeal to inherent indubitability. Whether they do so depends on whether a suitable transcendental argument may be provided, and the object of the present Chapter is to consider whether two such arguments, deriving from epistemological assumptions that have had some popularity, are capable of fulfilling this requirement.

5. The Possession of Knowledge Proof

The first of these arguments substitutes for 'p' in the schema for transcendental arguments that we have suggested, the proposition that we possess knowledge. The contention is hence that the fact of our possessing knowledge is not open to dispute within rational discourse, and for this reason we may refer to the argument as the 'Possession of Knowledge Proof', or, for brevity, 'PKP'. In addition, the following claim of the form '$\mathrm{L}(\sim q \supset \sim p)$' is made: namely, that it is a logical presupposition of our possessing knowledge that we be able to identify those among our beliefs that constitute knowledge. From these combined premises it may thus be inferred that, q, we are able to identify those among our beliefs that constitute knowledge. We may display the argument, in its proper order, thus:

(1) It is logically necessary that if we are not able to identify those among our beliefs that constitute knowledge ($\sim q$) then we do not possess knowledge ($\sim p$).

(2) But we do possess knowledge (p) for this is a fact not open to dispute within rational discourse.

(3) Therefore, we are able to identify those among our beliefs that constitute knowledge (q); to deny this, given (1) and (2), gives rise to a self-contradiction.

This, however, is only the first stage in an attempt to demonstrate the indisputable truth of beliefs whose truth contradicts EM, for what needs to be shown for that purpose is that our existing beliefs about the content of perceptual experience, notably those that admit the existence of qualia, are true. The second stage, by which this purpose may be achieved, is to argue that the ability to identify beliefs that constitute knowledge depends upon the ability to identify as knowledge certain basic beliefs concerning the content of perceptual experience, among which being ones that admit there to be qualia. The first stage needs, in effect, to be augmented by the Empiricist foundation

theory of knowledge.[1] Thus we need to add:

(4) The ability to identify beliefs that constitute knowledge logically presupposes the ability to identify as knowledge basic beliefs concerning the content of perceptual experience; so that given,

(5) We are able to identify those among our beliefs that constitute knowledge ((1), (2), (3)), it follows that,

(6) We are able to identify as knowledge basic beliefs concerning the content of perceptual experience.

The two stages of PKP thus consist of successive transcendental arguments, with the demonstrandum of the first stage constituting a premise in the second. The proof is therefore more complicated than the basic schema for transcendental arguments, but only to the extent of conjoining two arguments conforming to it.

A number of matters may be raised in appraisal of PKP, beginning with the premise with which we started out, that the fact of our possessing knowledge is not open to dispute within rational discourse ((2) in the above listing). The justification for this premise is that its negation, the suggestion that we do not possess knowledge, commits us to total scepticism, which is an incoherent position to adopt, and is hence indefensible within rational discourse. For, the expression of total scepticism has to assume what it denies, that we possess knowledge. Unless, at least, the ability to know what words mean is granted, we are not in a position to attribute any significance to the denial that we possess knowledge - it could just as well be treated as the claim that no belief may be doubted, or any other claim, and hence no claim at all.

Aside from (2), which has now been shown to derive from one of the least controversial propositions in philosophy, the incoherence of total scepticism, the argument involves premises that are matters of dispute. This is certainly true of the second stage, which invokes

the Empiricist foundation theory. It may, for example, be asked why the ability to identify beliefs that constitute knowledge presupposes being able to identify as knowledge basic beliefs concerning the content of perceptual experience, and, even if this is justifiable, questions arise as to how the category of basic beliefs is to be defined. The following defence for the second stage of PKP may be envisaged, taking as its starting point the 'standard' conception of knowledge as justified, true, belief .[2] It follows from this conception of knowledge that a belief may only be identified as knowledge if it may be justified as true. We must be able to produce sufficient grounds for holding a belief true if it is to be identified as knowledge. But then grounds will only be sufficient for the identification of knowledge in the face of the necessity of avoiding scepticism, if the beliefs appealed to in those grounds are themselves capable of being identified as knowledge. Once again, therefore, applying the standard conception, the demand arises for justification - this time of the justificatory beliefs - and it becomes clear that a justificatory regress will be launched that will forever thwart the aim of identifying beliefs that constitute knowledge. Universal application of the standard conception of knowledge seems thus to be inconsistent with the necessity, demonstrated in the first stage of PKP, of our being able to identify beliefs that constitute knowledge so as to avoid the incoherence of total scepticism.[3] Such universal application, if this is correct, cannot therefore be required.

The obvious alternative is to postulate a class of beliefs that may be identified as knowledge without further justification, and which may thereby offer an end to justificatory regresses. They would count as knowledge by their very nature rather than the ability to provide justification. A favoured suggestion, which lends assistance to the cause of opposing materialism, is that beliefs arising from 'immediate perception' constitute the required category. Thus, Armstrong has argued that,

> Since immediate perception is the last court of appeal when it comes to questions about physical reality there is no objection, it seems, to saying in immediate perception at least, that we acquire knowledge of certain facts about the physical world without good reasons.[4]

The references here to the physical world are not to be treated as pre-judging any issues in the materialism debate - indeed, at the time Armstrong wrote the above, he regarded Secondary Qualities and their qualia as constituents of immediate perception of which the physical sciences make no mention in their account of the world.[5] Such qualities are, indeed, typically recognised in the Empiricist foundation theory, of which the quotation from Armstrong is but a recent example, as ones of which we have knowledge which needs no justification, by virtue of their featuring in immediate experience.

There is, then, a prima facie case for the second stage of PKP, but the task now is to determine whether that case withstands critical scrutiny. In this regard, there is, for one thing, the anticipated question over the definition of basic beliefs concerning the content of perceptual experience. Armstrong's suggestion , which is the characteristic means of expounding the Empiricist foundation theory, is that these be ones that are involved in immediate perception, but this raises more questions than it settles. His own preference as to how immediate perception should be understood is in accordance with the Berkeleian conception of non-inferential perception[6] that was discussed in Chapter 6. It emerged there that such perception was perception where there was no appeal to inductive inference to decide between alternative possibilities as to what the content might be, and this reduced to a matter of perceptual beliefs where we could think of no alternatives the realisation of which would render those beliefs false. This criterion of immediate perception, of course, corresponded exactly to a conception of indubitable beliefs which we earlier had reason

to reject. The problem is, as we pointed out, that the ability to think of alternatives is something that varies from individual to individual - and is particularly marked among parties to the debate about materialism. Are we to say, then, that PKP renders logically immune from doubt one set of foundation beliefs for certain individuals and another, contradictory, set for others who can envisage alternative possibilities more or less readily? Clearly not. We have here a reductio ad absurdum of the appeal to immediate perception, as understood by Armstrong and Berkeley, as demarcating the category of basic beliefs needed by PKP.

What other possibilities are there? To identify the category with beliefs deriving from a Russellian perceptual acquaintance would be to return to the indefensible givenness of perceptual acquaintance (GPA) that was refuted in Chapter 7. Equally inadmissible would, of course, be to identify it as the class of perceptual beliefs which we are able to render logically immune from doubt - the strong conception of indubitability that we have adopted here - for that is what PKP is supposed itself to achieve. It begins to look, then, as if there is no satisfactory means of demarcating the class of basic beliefs that PKP requires, and hence that we cannot proceed, as the argument suggests we can, from the indisputable fact of our possessing knowledge to knowledge of the existence of qualia.

The second stage of PKP is not the only one that is susceptible to criticism , for so too is the whole nexus of the possession of knowledge, the identification of instances of knowledge, and the avoidance of total scepticism, that is invoked in the first stage, and gave rise to the doubt about the standard conception of knowledge, and the demand for a foundation theory. The standard conception of knowledge as justified, true, belief was objected to because it engendered a justificatory regress which prevented the requirement of identifying instances of knowledge being satisfied - each stage in the process of justification required proof as to the truth of the beliefs appealed to, for otherwise

the identification of knowledge might fail, with the result that the sceptic might be right in denying that we possess knowledge; but then the inability to complete the justificatory process, within the assumptions of the standard conception, also means the sceptic might be right. From this, it was inferred that identification of instances of knowledge, as required to avoid the incoherent position of total scepticism, was beyond the standard conception of knowledge. The process of justification must be brought to an end, as only a foundation theory seemed to allow.

However, this argument only holds on the assumption that the only means of avoiding the incoherence of total scepticism is an identification of instances of knowledge which is infallible. A justificatory regress is only serious if the concern is to exclude all possibility that a belief identified as knowledge might fail to be knowledge. But, to think that infallible identification is the required response to total scepticism in fact grants the sceptic more than he is entitled to, since it credits him with presenting a valid argument that must be countered rather than one that collapses through admitting of no coherent statement. As we said, at the very least, the sceptic requires the assumption that he knows what he is saying, but he may not consistently assume this and deny that we possess knowledge, for the latter implies that he is not entitled to that assumption. The first stage of PKP thus only favours the postulation of a foundation of beliefs that require no justification, on the mistaken assumption that the sceptic needs to be refuted by an infallible identification of instances of knowledge. Nor does scepticism in fact threaten the standard conception of knowledge, since the same mistake is involved. This rejection of the appeal to the need to avoid total scepticism by PKP conforms to what is arguably the prevalent view among philosophers, that the error of total scepticism lies not so much in its disregard of beliefs

whose truth must be deemed absolutely conclusive, but in its trying to call everything into question at once.[7] A famous analogy, due to Neurath, illustrates the point.[8] The analogy pictures our system of belief as a boat which we seek to reconstruct while remaining afloat in it - we may only remove individual planks at a time, be it to investigate their soundness or to replace them, or the boat will sink, as the sceptic finds when he tries, figuratively, to take out the whole lot.

Two reasons have now been provided for rejecting PKP as a means of demonstrating, by transcendental argument, the truth beyond dispute within rational discourse of beliefs whose truth refutes EM. These are: (1) it has proved evidently impossible to offer a satisfactory definition of the category of basic beliefs concerning the content of perceptual experience which PKP requires if it is, specifically, to render indubitable beliefs about that content that contradict EM; (2) we have now seen that the inference from the need to reject total scepticism to the need to adopt a foundation theory of knowledge, as against the standard conception, is invalid. Total scepticism is self-refuting and does not, as was assumed, require the infallible identication of items of knowledge, that was precluded by the standard conception.

Now, although PKP must thus be rejected, something that was achieved without our having had to consider whether it proved type or merely token indubitability, consideration of it has served some useful purposes. It has, for one thing, enabled a line of objection to EM to be evaluated that reflects a long-standing epistemological tradition, that of Empiricism. This is a tradition in which a central motivation has been the conviction that the appropriate response to the sceptic is the absolutely conclusive identification of beliefs relating to the content of immediate perceptual experience as items of knowledge.[9] PKP was an attempt to provide logical backing to that conviction. A further aspect of this tradition will be examined in the next

Chapter, where we will consider the thesis that linguistic meaning depends upon descriptive terms labelling contents of immediate experience. This will, it should be noted, involve an examination of a further construal of the notion of immediate experience to those rejected in the present Chapter, which although no more successful than those considered here, requires more extended treatment than is justified purely in connection with PKP, being a departure from the usual ideas. Consideration of PKP, when reinforced by the further reflections on immediate experience to follow, does make it apparent that any argument which shared its dependence on the ability to define a category of basic or foundational beliefs relating to the content of perceptual experience, will fail for that reason. We may now turn to the second of the transcendental arguments that are the concern of this Chapter, which appeals to a number of different aspects of our success in dealing with the world as evidence of the truth of beliefs we hold about it.

4. Our success in dealing with the world

In his recent book Reason, truth and history, Putnam observes that,

> The suggestion is popular nowadays that the evolutionary process itself has somehow produced a correspondence between our words and mental representations and external things... that we would not have survived if there had not been such a correspondence.[10]

The proposal is, in other words, that evolutionary processes, the process by which the fittest survive, may be invoked as evidence of the truth of the beliefs we hold about the world, since, had we held false beliefs, we would not have survived in the face of those pressures.[11] There is implicit in this argument a transcendental argument of the following form:

(1) If it were not the case that the beliefs we hold about the world are true then we would not have survived; but,

(2) Indisputably we have survived, so

(3) The beliefs we hold about the world are true.

(1) may be proposed to be a matter of logical entailment given the sorts of individuals that indisputably we are, biological organisms, whose survival depends on our ability to deal with the world in such a way that the requirements that this nature imposes for survival are satisfied. We could not, logically, have this ability if we did not believe the world to be as it is, since we act on the world in accordance with our beliefs. To take some obvious examples, we would not long survive if we believed certain items to be nutritious foods which were in fact poisons, or that our bodies were incapable of sustaining physical harm.

What is being presented here is, in effect, an application of the pragmatic criterion of truth, according to which the truth of a belief is to be inferred from the consequences of action in accordance with it, successful consequences, such as survival, implying truth. The evolutionary survival argument is, moreover, not the only application of this criterion that may be invoked as a transcendental argument against EM. Another possibility is to appeal to the very success of ordinary language as a means of describing the world, as evidence of the truth of its descriptions. Since among these are descriptions relating to the content of perceptual experience whose use expresses the belief in non-physical entities, the truth of such descriptions, by the pragmatic criterion, would suffice to refute EM. An appraisal of the evolutionary survival argument with which we started this Section may therefore be broadened into a more general assessment of whether the pragmatic criterion of truth is of any value in opposing EM.

5. Evolutionary survival, the success of ordinary language, and EM.

The crucial question for a verdict on the evolutionary survival argument, and more generally in considering applications of the pragmatic criterion of truth, is how far the success achieved may be said to entail true beliefs. For one thing, it is clear that there is no question of

inferring the type indubitability of perceptual beliefs on the basis of our survival, for, we are sometimes mistaken in virtually all sorts of perceptual judgement that bear on our action in relation to the world, and whereas general misperception would without question threaten our survival, both as applied to the individual and to people as a whole, isolated instances manifestly do not, provided the consequences are not too catastrophic. Token indubitability alone, then, may be argued by appeal to evolutionary survival. But doubts then arise as to whether even this may be demonstrated for beliefs whose truth contradicts EM. These doubts centre upon how accurate and, indeed, how detailed our beliefs about the content of the world have to be as pre-conditions for survival.

What, essentially, any organism requires in order to survive is to seek and avoid the right things, as with our earlier example of seeking nutritious foods and avoiding poisons. To this end, it is necessary only to discriminate accurately recurrent features of the environment to the extent that is necessary to make the biologically adaptive response; to tell the ripe fruit from the unripe, say. Detailed knowledge of the intrinsic natures of those constituents, such as the knowledge that ripe fruit <u>is</u> fruit whose surface exhibits the quale of red, as opposed to propagating electromagnetic radiation in predominantly the long wave end of the visible spectrum, is not required for this purpose. The evolutionary survival argument thus seems insufficient to permit the deduction of truths that contradict EM.

Perhaps, however, we are being too restrictive in considering an argument that does not distinguish the ability of the human percipient to perceive the environment and survive within it from that of organisms with lesser cognitive faculties. Human percipients are able to acquire much more information about the world than others, notably through the ability to use language, which greatly enhances their ability to deal successfully with the world, to transform, and control it. Thus the successful use of language in relation to the world may be pointed to

as evidence of the truth of the descriptions it embodies. More particularly, for purposes of opposing EM, it is necessary to call attention to the success of ordinary everyday language, for it is through the concepts expressed by the use of this,[12] as opposed to the rival description of the world provided by scientific language, that we are committed to intrinsically non-physical items.

An appeal to the success of ordinary language as envisaged here finds clear expression, as Feyerabend has noted, in the words of Austin, according to whom our common stock of words,

> Embodies all the distinctions men have found worth drawing, and the connections they have found worth making, in the lifetime of many generations: these surely are likely to be more numerous, more sound, since they have stood up to the long test of survival of the fittest, and more subtle... than any you or I are likely to think up.[13]

Our language, as much as our species, is exposed to survival pressures through its dealings with the world, and is caused to adapt to the way the world is.[14] If, moreover, ordinary language did not truly represent the world, the implication seems to be, it would have been exposed long ago by virtue of its very longevity, to the detriment of any rival locutions of recent invention. Another related point that has been suggested as evidence of the truth of ordinary language characterisations is their universality.[15] Most languages, for example, embody equivalents of English colour terms, the main exceptions being where language users inhabit environments where there is 'no call' for them, as in the case of the Eskimos.

Now, certainly, the fact that descriptions of everyday English are long established and common to most languages is clear evidence of their success in dealing with the world. They would, as Austin says, have been weeded out long ago were this not the case, which suggests that they do recognise certain truths about the world. But the question

is what truths they recognise. Do these considerations show, for example, that the term 'red' denotes a simple, homogeneous, unanalysable constituent of reality whose nature is knowable through experience alone, in accordance with the commonsense concept expressed by its use? It seems not. For, firstly, an alternative explanation of its successful use is that it depends on the term serving to mark a pre-existing perceptual discriminatory capacity, towards the limits of our ability, with unaided vision, to discern recurrent features of the environment.[16] All language users having commonly structured perceptual apparatus, they would similarly share this discriminatory capacity, and it is not surprising that different languages should each have their own terms marking it. There is no implication, on this account, that the successful use of 'red' presupposes that there be some simple, homogeneous quality that it refer to; all that is required is that there be some advantage in having a term to apply to objects that occasion the discriminatory capacity. Not only this; we argued in Chapter 5 that the presence of a particular quale, something knowable only through experiencing it, could not be a condition for the use of colour terms and the like in public discourse (although it is a central element in our existing individual concepts attaching to those terms). Thus, the successful use of colour terms cannot be concluded to imply the existence of qualia.

Any appeal to the success of ordinary language in facilitating our dealings with the world, as a means of demonstrating that there are in fact non-physical items in the world, as the associated commonsense concepts imply, is, in any case, opposed by the still greater success that may be claimed for scientific descriptions of the world, in which, as we have seen, no reference is made to qualia. These descriptions, far more than those of ordinary language, permit us to predict the behaviour of, transform, and control constituents of the environment, and may, by the pragmatic criterion, accordingly be said to be more true. But even

in the case of scientific descriptions, it may be argued that the successful consequences of actions in accordance with them, in terms of the fulfilment of predictions and the ability to transform and control the environment, do not permit the inference that the descriptions are true. For, while the truth of a description may be a sufficient condition for successful predictions and the like, it need not also be a necessary condition. The same predictions, or, to use Putnam's expression, the same 'directive beliefs', may be deduced from a whole variety of different descriptive frameworks,[17] so that their success does not entail the truth of any one of these latter. Questions have even been raised, by, for example, Putnam himself, over whether it is meaningful to speak of a single true description that may be inferred in this context.[18] In any event, it is now clear that the appeal to our successful dealings with the world, whether through the initial transcendental argument appealing to logical presuppositions of our bare survival, or the alternative appeal to the success of ordinary language, do not permit the inference of the truth of beliefs contradicting EM. In each case, the facts appealed to were not sufficient warrant to infer the truth of such beliefs, and indeed, by the pragmatic criterion of truth, there is reason to reject the existence of qualia and the like, since our successful dealings with the world are promoted to a far greater degree through the descriptions of the world offered by science which, of course, exclude all reference to such things.

## 6. The failure of the arguments considered

We have now had to conclude that two transcendental proofs, or sorts of proof, must be rejected as means of rendering logically immune from doubt beliefs that contradict EM, respectively, the Possession of Knowledge Proof and the various arguments involving the idea that our successful dealings with the world logically presuppose the truth of certain sorts of belief. They were selected

for consideration as reflecting assumptions that have had some degree of popularity - in the case of PKP, more in the past than the present - and which seemed promising as means of inferring the truth beyond dispute of beliefs contradicting EM. In each case also, the arguments were pronounced to have failed, aside from their more particular faults, through an apparent inability to narrow the focus of the proof so as specifically to validate beliefs of the latter sort. Thus, PKP failed due to the evident inability, at least by reference to the usual suggestions, to define satisfactorily the category of basic beliefs, and thereby validate the belief in qualia. And, while the various forms of successful dealings proof seemed to imply some ability to detect recurrent features of the world, they fell short of showing that among such features must, by logical implication, be qualia. This common source offailure suggests that the transcendental mode of argument is inherently unsuited to the demonstration of truths of the specificity required for opposition to EM, whereas it works better with ones of a more general nature, as in Kant's own transcendental deduction of the categories of experience.[19]

Perhaps, however, this conclusion is too hasty. For, there is a further argument in the transcendental mode that appears to have all the specificity required for opposing EM successfully. It proceeds by conjoining the indisputable assumption that we know the meaning of the words we use, at least insofar as the fundamental elements of our language are concerned, with an 'ostensive tie' conception of their meaning, as embodied in logical atomism. This conception of linguistic meaning also allows it it be argued that the ontological revision proposed by EM is not so much false as meaningless. In assessing this argument, which will be the task of the next Chapter, an alternative will, as we said, emerge to the already rejected renderings of immediate experience, but neither this alternative nor the argument itself will prove successful, so confirming the tentative conclusions of the last paragraph.

## CHAPTER 10

## Knowledge of language and knowledge of fact - the ostensive tie conception of the meaning of descriptive terms

### 1. Summary of Chapter

Attention now turns to what is the final transcendental argument that will be considered here as a means of opposing EM, and also the last attempt to show that the belief in items inconsistent with materialism is indubitable. It takes as its initial premise the indisputable necessity of granting our knowledge of language, which, in turn, implies granting a knowledge of the meaning of descriptive terms. It then appeals to the ostensive tie conception of their meaning, such that to know this is to know what the terms refer to or label, as characterised the doctrine of logical atomism. Our knowledge of the referents of terms is then held to be provided through the awareness of them in perceptual experience. Thus it is concluded that our knowledge of language implies knowledge that certain contents are present in perceptual experience, and hence commits us to a fixed and unrevisable ontology. But to prove that among those known contents must be things like qualia, it becomes necessary to appeal to the idea that the known contents are contents of immediate experience, of which a new account is offered in the light of the previous difficulties. Immediate experience, it is proposed, is the experience of content that is had through the application of classifications or beliefs that do not involve 'background assumptions', assumptions concerning the presence of items that we cannot discriminate in themselves. This addition to the argument is justified on verificationist grounds.

The argument is criticised for a number of reasons. First, it emerges that the exclusion of background assumptions in explaining the known referents of terms, renders meaningless discourse about ordinary physical objects, and indeed about subjects of experience,

consequences as unacceptable as the claim that we do not know language. Then, the idea that language merely connects up with pre-existing awareness of content, to the exclusion of its creating new awareness, is criticised. Finally, it is argued that the assumption that to know the meaning of a descriptive term implies knowing its referent is too strong - we need only know the purported referent, what is believed to be referred to by a term.

It is then argued that the failure of the present argument, together with that of previous attempts to render the belief in qualia and the like indubitable, suggests that it is not in fact possible to achieve this end.

2. The ostensive tie conception of the meaning of descriptive terms as a basis for transcendental argument against EM.

Our previous discussion of the incoherence of total scepticism indicated that, at the very least, the sceptic has to assume that he knows the meaning of the words he is using in expressing his doubts. Knowledge of language is a presupposition of rational discourse by the very notion of discourse. But suppose it may be argued, from the necessity of granting knowledge of language, that such knowledge entails knowing certain facts about the world, in particular, as manifest in perceptual experience. Then, it appears, there is a further basis for opposing EM by means of transcendental argument, to those we have already considered, and one deriving from a fact that, more than any other, is not open to dispute within rational discourse. How, though, is the connection to be made between knowledge of language and knowledge of fact about contents of the world as manifest in perceptual experience? The obvious answer is through the idea that knowledge of the meaning of descriptive terms, without which we could not be said to know a language, is a matter of knowing what their referents are, the constituents of the world that they label, and this knowledge is made possible through these constituents being manifest in perceptual experience.

The ontological implications of this view of the meaning of descriptive terms are fully appreciated by Sellars, who refers to,

> The conviction that what is called the 'ostensive tie' between our fundamental descriptive vocabulary and the world rules out of court as utterly absurd any notion that there are no such things as this framework talks about.[1]

It is a prime source of the Given since, if our very knowledge of language commits us to knowledge of particular constituents of reality, we are similarly committed to a fixed and unrevisable ontology, for our knowledge of those constituents could not then be called into question without knowledge of language being similarly called into question. Revisionary metaphysics, which proposes alternative conceptions of what the ultimate constituents of reality are, is thereby rendered impossible; all that can be done is a systematic identification of the known referents on which all descriptive language depends for its meaning. The attempt to propose alternative conceptions of the ultimate constituents of reality, insofar as it requires the use of descriptive language that is not interpretable in terms of those known referents, is literally meaningless.

The account of the meaning of descriptive terms that we have just described, wherein that meaning depends on terms labelling constituents of reality, or, in other words, an ostensive tie between the two; the commitment to a fixed and unrevisable ontology; and the impossibility, indeed, the meaninglessness, of revisionary metaphysics, are all key tenets of the doctrine of logical atomism that is associated with Russell[2] and the early Wittgenstein.[3] Something has already been said of Russell's version of this doctrine in the discussion of GPA,[4] and it is his version rather than that of Wittgenstein which seeks explicitly to represent knowledge of the meaning of descriptive terms as a matter of knowing the contents of perceptual experience that they refer to. Wittgenstein, for reasons that need not be considered here,[5]

postulated that the referents of terms, when fully analysed, were absolutely simple objects, with no suggestion that these objects were consciously apprehended. His view thus does not assist the present argument, and may be criticised, first, on the grounds that the notion of absolute simplicity is an invalid one, since simplicity, as the later Wittgenstein himself objected,[6] is always a matter of simplicity relative to some criterion; and, second, although this is more contentious, that it appears wrong to seek to explain knowledge of linguistic meaning in terms of what is not consciously accessible.[7]

Of course, Russell's version of logical atomism is no less problematic than Wittgenstein's since, as we saw, it proposes that the meaning of descriptive terms depends on their labelling contents of perceptual experience that are known through acquaintance, the non-belief-laden awareness of content that was refuted in Chapter 7, so that if there is to be a real possibility of appealing to the ostensive conception of the meaning of descriptive terms in the proposed transcendental refutation of EM, it is necessary to replace Russellian acquaintance in explaining our knowledge of the referents of terms. Any suggested alternative must be consistent with the recognition that all awareness of content in perceptual experience involves classification of that content, and hence the holding of beliefs about it. These classifications and beliefs may not, moreover, be ones that presuppose language if they are to gain application, for then the situation would be one in which an awareness of content that is supposed to explain our ability to know a language itself depended on our possessing that ability. It is thus necessary to invoke the idea of non-linguistic beliefs or classifications of perceptual content, such that language may serve to label content that we are presented with in perceptual experience through the mediation of non-linguistic beliefs. These beliefs and classifications must, moreover, be deemed to be ones that correspond to features that the content actually

possesses or else we may not be said to have knowledge of the referents of the terms we use, as is required, on the assumptions of the present argument, if we are to know the meaning of descriptive terms.

We have now an argument that proceeds by the following stages:

(1) If we are to have knowledge of language, as we must be presumed to have as a presupposition of rational discourse, we must know the meaning of descriptive terms.

(2) To know the meaning of descriptive terms presupposes, according to the ostensive conception of their meaning, hereafter 'OC', knowing what they label.

(3) This knowledge is provided through knowledge of the content of perceptual experience, which, in turn, implies the holding of true non-linguistic beliefs about that content, or the application of accurate non-linguistic classifications to it.

(4) Our knowledge of language thus implies knowledge that reality has certain constituents as manifest in perceptual experience, and this, in turn, enforces a fixed and unrevisable ontology, first, because of that very connection between knowledge of language and knowledge of reality, and, second, because any discourse that is not interpretable into discourse about the known constituents of reality is meaningless.

The argument is incomplete as a means of opposing EM since it has yet to be determined that qualia are among the constituents that are known to be present in perceptual experience as the referents of descriptive terms. It would appear to be easy enough to do this within the provisions of the above argument. Qualia are, after all, experienced to be present as the referents of terms that most obviously conform to OC, colour terms and the like, where, as we have seen, no significant verbal specification may be provided as to what intrinsically distinguishes the referent of one such term from that of another.[8] The non-linguistic classification of content that mediates our awareness of qualia as simple, homogeneous entities, entities that admit of no

structural decomposition into constituent elements nor qualitative variation, must be deemed accurate and the beliefs constituted by their application true, as a condition of our knowing the meaning of the latter terms.

But supposing it is objected that it is logically possible, or involves no obvious contradiction, to hold that other classifications might have been applied to the content of perceptual experience that we label by colour terms and the like, such that it was not experienced as simple and homogeneous in the above sense, but as embodying structural complexity of the sort suggested by the advocate of EM. In those circumstances it could similarly be argued that the beliefs held must be deemed true, as a condition of knowing the meaning of those terms. Clearly, therefore, the possibility of such alternative classifications must be excluded if any inference is to be drawn from our knowledge of the meaning of colour terms to knowledge that there are, in fact, qualia. To this end, it might be objected that the classifications the advocate of EM would wish to apply to the content denoted by colour terms, such that a given case is experienced as the presence of a certain wavelength composition of electromagnetic radiation, are ones that derive from physical theory and, as such, are dependent on language. The only ones properly available for the mediation of our experience of the referents of colour terms are ones that do not presuppose the prior understanding of language, for they are, of course, intended to explain that very understanding. This objection, however, merely resurrects the debate that was encountered in Chapter 7[9] over just what beliefs do in fact logically presuppose language. Insofar as this question is not settled, it is of little value to object to the possibility of alternative non-linguistic classifications on the grounds that the alternatives presuppose language.

Perhaps, however, we have neglected ways of characterising the content of perceptual experience that is the basis of the meaning of descriptive terms, that have both frequently featured in the discussion of logical

atomism and allow the exclusion of alternative classifications of content that are to the detriment of knowledge of qualia. Thus, it could be argued that knowledge of the meaning of descriptive terms depends on knowing the contents of immediate experience that they label, or the qualities of sense data they denote, and qualia are prime examples of items embraced by these latter categories, while qualities specified by physicalistic classifications, such as 'electromagnetic radiation', certainly are not. Unfortunately, we have only recently encountered the difficulties attaching to an adequate specification of the notion of immediate experience, and the notion of a sense datum is frequently explained itself as a content of immediate experience, or something that is indubitably present.[10] But at this point we may introduce the alternative conception of immediate experience that was anticipated in the previous Chapter, and which may serve the purposes of the present argument even if it may not save PKP, which was prey to other objections. It is one that appeals to the de facto limitations of our powers of perceptual discrimination, and may be introduced by reference to the proposal that the contents of perceptual experience labelled by colour terms <u>may</u> be classified as various wavelength compositions of electromagnetic radiation.[11]

Now, if we are to classify a content of perceptual experience as a certain wavelength composition of electromagnetic radiation, we have to make the assumption that items are present as constituting that content that we are unable to distinguish in their own right. Thus, we cannot distinguish the wave structure of electromagnetic radiation which science postulates to be present, nor the individual photons that compose that structure, for our sense organs are not sufficiently sensitive to allow us to do so. Such items are not individually capable of stimulating our sense organs so as to allow us to make a discriminatory response to them. We may refer to assumptions to the effect that the content of perceptual experience has constituents that we are incapable

of distinguishing or responding discriminatively to in their own right, as 'background assumptions'. And it may now be suggested that immediate experience consists in the experience of content as it results when classifications are applied that involve no background assumptions. This conception of immediate experience may then be appealed to in explaining our knowledge of the meaning of descriptive terms in accordance with the ostensive conception (OC), so that our knowledge of what descriptive terms label is said to consist in knowledge of the content of perceptual experience to which they refer, as experienced without the involvement of classifications that employ background assumptions. If, moreover, the ability to appeal to background assumptions is thus removed in explaining, for example, knowledge of what colour terms label, that knowledge may then only be represented as a knowledge of qualia; for, with the ability to assume to be present what we cannot distinguish in its own right gone, we are left with an awareness of simple, homogeneous items, for qualia may be said to mark the limit of our capacity to distinguish among perceptually manifest qualities. The present argument needs thus to be supplemented by a further stage, as follows, if it is to succeed:

(5) Our knowledge of the meaning of descriptive terms must be explained as a matter of knowledge of contents of perceptual experience as experienced through the application of classifications that do not employ background assumptions, assumptions to the effect that items are present, as constituting that content, that we are incapable of discriminating in their own right.

3. The rejection of background assumptions itself rejected

The argument against EM that we have now obtained from the ostensive conception of the meaning of descriptive terms, which we may refer to as the 'Ostensive Conception Proof', or 'OCP' for short, involves a number of contentious assumptions, and the task now is to decide whether they are justifiable ones. The first that may be questioned is the most recent

addition to the argument, point (5) above. Why should it be insisted that the only classifications we may apply to the content of perceptual experience as a basis for knowing what descriptive terms label, are ones that involve no background assumptions? Here it may be responded that the employment of background assumptions is invalid because, by definition, it is not possible to tell, in the only way available to us, that the assumptions have any foundation in fact. Since, in other words, it is not possible to discriminate the items that such assumptions imply are present in the content of perceptual experience, it is contradictory to suppose that we know them to be present, for we could not know this unless we could tell them to be present, and we cannot do so because we cannot discriminate them. Thus, knowledge of content in perceptual experience, for the purposes of explaining our knowledge of the meaning of terms, must be confined to what we are capable of discriminating in its own right.

What has, in effect, been added to OCP by point (5) is a verificationist assumption that we may not appeal to anything in explaining our knowledge of the meaning of terms, that we may not verify to be present within the content of experience, as determined by our de facto capacities for perceptual discrimination. It also suggests an epistemological objection to EM, that we may only claim knowledge of items as present within the content of perceptual experience, that we may experience as present without the addition of background assumptions; knowledge of fact is only possible insofar as the propositions concerned relate to immediate experience, as defined by the exclusion of background assumptions, or are translatable into propositions about immediate experience. However, both in the explanation of linguistic meaning and as applied to knowledge of the world, the exclusion of background assumptions has disastrous consequences, ones that are familiar from the more usual interpretations of immediate experience if used as suggested here.

The first such consequence of excluding background assumptions from the account of knowledge of the meaning of descriptive terms is that it

renders meaningless discourse about ordinary physical objects just as much as discourse about theoretical (unobservable) entities. Our use of terms to refer to ordinary objects like tables and chairs is intended to recognise the existence of items of which only parts are perceptually discriminable at any given instant. When, for example, we see the front of a chair we cannot see the back, nor what its internal composition is, but when we say that a chair is present, on the basis of seeing its front, we imply that these other features also are present. Ordinary discourse about such objects, insofar as it implies the presence of things that are not available to discrimination within the content of perceptual experience, is thus rendered meaningless. The only hope would be if statements about such objects were translatable into ones that did not make assumptions to the effect that the content presented also had features that we were not able to discriminate. Attempts to execute this task have in the past been made, as when it is argued that talk about tables and chairs may be translated into talk about associated collections of sense data.[12] It has, however, so far as may be told, never been possible to execute this task. Always the need to refer to the existence of entities not available to discrimination has intruded itself; a need which is rendered particularly acute by the fact that ordinary physical objects are conceived to exist when no part of them is being experienced by any percipient. Just the same difficulties may be raised for the epistemological version of the argument: to deny knowledge of anything that involves background assumptions in the experiencing of it is to preclude the possibility of knowledge of ordinary physical objects.

Perhaps the most powerful criticism of the appeal to immediate experience as a basis for knowledge of language or of the world was in fact provided long before such views ever became popular in the present century, namely, the transcendental arguments of Kant himself. If we are forced to abandon the idea that there exist

objects with features other than what we are capable of discriminating, and hence the idea of ordinary physical objects, then it is logically impossible to retain the idea of ourselves as subjects of experience, so Kant, in effect, argues.[13] Strawson has, similarly, persuasively argued that to preserve the latter idea, we further need the notion of other experiencing subjects, and hence the assumption of further phenomena, the experiences of others, that are quite intractable to our powers of perceptual discrimination.[14] OCP, with its reliance on the exclusion of background assumptions, thus gives rise to conclusions that it appears are no more acceptable within rational discourse than those it is intended to avoid. For, the starting point of the proof was the concern to avoid the conclusion that we do not know the meaning of the words we use, but it has as its outcome the conclusion that central beliefs, such as the existence of ordinary physical objects, and even, it seems, subjects of experience, may not validly be retained. OCP may thus not be pressed as a refutation of EM; nor may the corresponding argument, addressing purely our knowledge of the world, that was recently mentioned. Since central elements in our existing conceptual scheme, ones that appear no more matters of dispute within rational discourse than the premise with which OCP begins, presuppose background assumptions, the involvement of background assumptions in the conceptual revision EM proposes may not be objected to on account of any objections in principle to such assumptions.

4. Other criticisms of the argument

So far, we have only mentioned criticism that applies to the final stage of OCP, but although this criticism is sufficient to refute the argument, it is not merely the final stage that is susceptible to criticism. There are many philosophers who follow Sellars in rejecting the ostensive tie conception of the meaning of descriptive terms because of its implication that language depends

on being tied to pre-existing awareness of content in perceptual experience. The requirement of such awareness is a consequence of OC since, if language gains meaning by labelling contents of experience, then there must be an already existing awareness of content for the labels to be attached to. There is, however, a tendency for criticism of this aspect of OC to go to extremes, with Rorty, for example, pronouncing at one stage that there is no such thing as 'pre-linguistic awareness',[15] following on from Sellars' own sympathy with the doctrine he entitles 'psychological nominalism', according to which, 'all awareness of sorts, resemblances, facts, etc., in short all awareness of abstract entities - indeed, all awareness even of particulars - is a linguistic affair'.[16] Objections of this nature fall easy prey, as Rorty later recognises, to complaints that they are 'unfair to babies',[17] and, indeed, to sentient life forms that lack the capacity for language, but may nevertheless be said to have perceptual experiences. It is not, however, necessary to rule out an awareness of content, or classificatory consciousness, independent of language, or, indeed, to deny that some use of language may be to label content that we are aware of in that way, in order to criticise OC for attempting to ground all meaning attaching to descriptive terms on such awareness. For, instead, it may be responded that while some terms may label content that we are aware of independently of language, others may be such that, in learning their use, we acquire new classifications that, when applied to perceptual experience, create similarly new ways of experiencing its content. There is, moreover, no reason in principle, it then seems, why the replacement of a term that did label a content of which we were aware independently of language, could not transform the experience of that content.

But what of the assumption, constituting stage 2 in the summary of OCP, to the effect that we could not logically be said to know the meaning of a descriptive term unless we knew what it referred to? If

this survives, there remains force in OCP, so it may be argued, as a means of enforcing a fixed and unrevisable ontology, since it implies knowing that particular items exist as the referents of terms. Great difficulties have, however, been encountered in getting beyond this assumption, arising from the possibility that other classifications might have been applied to the content of perceptual experience and different beliefs held as to the referents of terms, which cannot, of course, all be true. The attempt to overcome these difficulties by appealing to immediate experience, the only obvious course to take, was shown to be a failure. It appears, then, an impossible task to identify categorically the known referents that constitute the meanings of descriptive terms according to OC, and this suggests that the assumption that the meanings of such terms is to be explained by appeal to their known referents is in fact an invalid one. Instead, it could, for example, be proposed that our knowledge of the meaning of a descriptive term consists in knowledge of what it purports to refer to, what we believe to be present when we use the term. The purported referent, of course, may or may not be what is actually referred to by the term in question, so that, on this construal, no conclusions as to how the world is may be drawn from our knowledge of the meaning of the terms we use to describe it. This does not mean that none of our descriptions of the world are true, but it does mean that, subject to the limitations of what may not be disputed within rational discourse, just which of our descriptions are true of the world, and which constitute more accurate descriptions than others, may be a matter of debate as advocates of EM maintain. Its outcome is not a foregone conclusion, by virtue of the presuppositions of knowledge of language, as OCP holds.

The failure of the assumption that to know the meaning of a descriptive term implies knowing its referent, prompts the question of why it should have been made in the first place. The answer, both in the use of OCP against EM and, at least in part, in the more general

use of it in logical atomism, is that the assumption advances 'the Cartesian quest for certainty'.[18] There is, moreover, a correspondence between the unnecessarily strong condition set here for our knowing the meaning of a descriptive term and the similar condition PKP set for our possession of knowledge, which is attributable to a shared concern to allay sceptical doubts. PKP required the absolutely conclusive identification of instances of knowledge if we are to possess knowledge, and similarly, OCP requires knowledge of the referent of a term, rather than mere knowledge of its purported referent, as a condition of our knowing its meaning. But, just as it turned out that absolutely conclusive identification of instances of knowledge was not required to allay scepticism about our possession of knowledge, so knowledge of the referents- the actual referents - of terms is not required to preserve the idea that we know the meaning of descriptive terms. OCP thus may be said to embody assumptions about what is required in the knowledge of linguistic meaning that, as with those of PKP, derive from the unwarranted view that the only means of rebutting total scepticism is by the identification of beliefs whose truth is absolutely certain - the purpose of the aforementioned Cartesian quest.

We have now to conclude that OCP, like the previous transcendental arguments, must be pronounced a failure. In reaching this position, by no means all the arguments that could have been raised in opposition to it have been presented. A notable omission has been the increasingly popular view that an atomistic conception of linguistic meaning cannot be sustained; that is, one which holds, as with OC, that the basic unit of linguistic meaning is the individual word, that knowledge of language is built up by learning more and more such self-contained units of meaning.[19] To have appealed to this criticism would, however, have involved entering into a major area of philosophical debate, involving such issues as how far in the direction of holism we should proceed in explaining knowledge of linguistic meaning, while those presented

above seem far less matters of controversy.

5. The way clear for EM?

With the failure of OCP, as with its predecessors, the conclusion that transcendental argument is incapable of rendering the belief in things like qualia indubitable becomes more compelling than when it was first suggested at the close of the last Chapter. In each case, the premises of the arguments considered have been shown not, contrary to first appearances, to establish the indubitability of beliefs contradicting EM. This finding clearly does not entail that there is no transcendental argument that may be offered, no indisputable presupposition of rational discourse that implies the truth of the belief that there are qualia, but it does render it improbable that there is one. For, the assumptions that the arguments have embodied are ones that have seemed to philosophers the most promising and direct means of vindicating the ability to identify instances of absolutely certain knowledge, and a fixed and unrevisable ontology-in particular, the appeal by PKP to the Empiricist foundation theory, and that by OCP to the ostensive tie conception of the meaning of descriptive terms, may be cited here. Indeed, these doctrines may be viewed as the royal road to indubitability, and it is with their demise that philosophers such as Rorty have felt at liberty to espouse EM. The appeal to successful dealings with the world is a surrogate for them which is equally ineffective.

If it is thus reasonable to discount transcendental argument as a means of vindicating the idea that the belief in things like qualia is indubitable, in the sense of satisfying GPB, we have reached what is arguably the end of the line in seeking to achieve this end. All the main possibilities seem now to have been explored and discounted. There was, first, the Russellian notion of acquaintance, as embodied in the Acquaintance Analysis of perceptual experience and in GPA, which was strongly implied by much of the recent criticism of EM. This not

only failed to demonstrate that beliefs inconsistent with EM satisfy GPB, as was required, but was also unsustainable as an account of the awareness of content in perceptual experience. Then there was inherent indubitability, which proved incapable even of allowing the possibility of holding factual beliefs in the contexts where it purportedly applied, let alone proving the beliefs concerned were not a matter of dispute within rational discourse. Finally, it must be recalled that any attempt to represent indubitability in terms that fell short of logical immunity from doubt as represented in GPB, would be inadequate to put beliefs that contradict EM beyond controversy.

It might be objected that in our consideration of whether beliefs inconsistent with materialism may satisfy GPB, and hence be incapable of being withdrawn as false, contrary to EM, we have concentrated on the belief in qualia, when EM also needs to be able to claim that certain beliefs about the location of sensations may also be false. Materialism, we have seen, cannot have objects like afterimages and phantom-limb pains located where there is no physical phenomenon to be found with which they may be identified, nor, indeed, may it accept more ordinary cases where the experience of sensations suggests that they are to be located to some degree other than where the corresponding physical phenomenon is to be found. But, then, the concentration upon qualia has been merely a matter of convenience. It is clear that none of the arguments that have been presented by reference to the attempt to render the belief in qualia logically immune from doubt would be any more successful if they were presented by reference to beliefs about the location of sensations. The appeal to GPA and inherent indubitability failed by virtue of incoherencies that were independent of any consideration of the specific beliefs they were intended to indemnify, and, likewise, PKP failed because it made indefensible assumptions in connection with the response to

scepticism. The experience of sensations as at locations where there is no corresponding physical phenomenon, rather than promoting successful dealings with the world and enhancing survival prospects, from which the truth of the beliefs concerned could be inferred, has quite the opposite tendency. A doctor will not be assisted in treating us by reports of the location of pains that do not help to pinpoint some physical lesion. Finally, it is difficult even to state the location objection in the context of the assumptions made by OCP. The location objection related to discrepancies between the location of sensations and the corresponding physical phenomena within the domain of physical objects, like legs and walls, but OCP was found to impugn discourse about such objects.

We are thus able to reach a conclusion of fundamental importance for philosophical appraisal of materialism, namely, that none of the beliefs that must be revised or withdrawn if that view of the world is to be regarded as true, are absolutely unrevisable by virtue of being logically immune from doubt within rational discourse. Doubts may still remain, however, about the specific revisions that EM wishes to make, even if these may not be opposed on the latter basis. Even if it is false that afterimages have the location they seem to have, and what we are really experiencing is activity in the retina, a satisfactory explanation must be given, within a materialist framework, of the seeming location of such phenomena, for, failing this, there is still reason to question whether the materialist view is adequate. Also, our current experience of qualia, and not the sorts of qualeless phenomena the materialist wants to cite as the content of experience when we see a yellow object in the environment or an afterimage, must similarly be explained. It may be open to doubt that we experience qualia, in the sense that it is not logically immune from doubt that such items actually exist, but there might still be reasons for doubting also that the items the materialist wants to substitute are what we in fact experience. These matters

may best be addressed along with a broader question that has so far been left outstanding, namely, that of the account that should be given of perceptual experience itself in defending materialism, for our answer to the latter question will enable them successfully to be disposed of. This, however, is the task of the next Chapter.

# CHAPTER 11

## A materialist account of perceptual experience and its content

### 1. Summary of Chapter

The main object now is to explain, in terms compatible with the truth of materialism, how materialism could have appeared false on the basis of perceptual experience. The inability to explain why, specifically, there should appear to be objects and qualities incompatible with its truth is, we said, a reason to doubt the adequacy of a materialist account of the world. The provision of such an explanation is now approached within a general account of perceptual experience which retains proposition A1 of the Acquaintance Analysis, according to which all such experience involves the awareness of content. Such awareness must, from previous conclusions, be belief-laden, and it is shown how the resultant account is, in its main elements, that of Kant, who postulated two components in perceptual experience-intuitions and concepts. Since the account is essentially Kantian it is necessary to defend it against long-standing criticisms of that view which have recently been revived. It is then shown how it meets the requirement of distinguishing what occurs in the chicken sexing case from ordinary perceptual experience, having previously been argued to be preferable to alternative means of so doing.

The account is next applied to accommodating perceptual experiences that appear to contradict materialism. First, the experience of sensations as located where there is no appropriate physical phenomenon is explained via an account of how we come to experience ourselves as immediately confronted with objects at a distance, while in fact such experience is had through the mediation of a causal chain. Both experiences are held to be due to classifications that we involuntarily

apply, and which may, in certain circumstances, yield false appearances. The application of classifications may be nothing more than a certain physical process, so that these experiences need imply nothing incompatible with materialism. The experience of qualia is similarly viewed as purely a matter of classifications, ones that involve no 'background assumptions'. In connection with the abandonment of these items, it is asked whether, for various reasons, the physical substitutes EM envisages are inadequate; for example, because there is no single substitute for any given quale, and the substitutes proposed seemingly fail to characterise the intrinsic natures of things. Such objections are argued to be unsustainable, and it is also asked how far our experience may be transformed to accurately reflect a quale-less world. With this, our defence of materialism is complete, and the opportunity is taken to compare it with a recent defence of EM presented by P.M. Churchland.

2. Perceptual experience reconsidered

The previous Chapter completed an examination of whether beliefs that contradict EM may be shown to be absolutely unrevisable, through being logically immune from doubt in accordance with GPB - which was claimed to be the only satisfactory philosophical basis for such unrevisability. It was concluded that no such opposition to EM appears possible, but it could still be possible to take issue with the specific revisions in our beliefs that EM wishes to make. Just as, say, the belief in qualia may be questioned as a result of the above, so the proposal that what is really presented, when we think we experience a quale, is something like electromagnetic radiation is itself open to dispute. Likewise, although it may be false that an afterimage is located where it seems to be, unless the materialist can explain why an afterimage seems to be located where it does, rather than where the retinal phenomena with which he identifies it are to be found, doubts may still persist as to the plausibility of this specific suggestion as to what it really is. Such issues, we said, are best addressed through a

consideration of the form a materialist account of perceptual experience itself should take, and this shall accordingly be the first task.

We must begin by re-tracing some earlier ground, starting with the refutation of the Acquaintance Analysis.[1] Crucial to its rejection was the conclusion that there may be no specific awareness of content in perceptual experience without the presence of beliefs as to the nature of the content as an integral part of the awareness. Classification must be imposed upon content as a condition of any specific awareness of it, and this amounts to saying it must be believed to be some way or another. But if beliefs are so important for the occurrence of perceptual experience, the impression might be gained that Armstrong was right after all; not in the sense of providing a defensible account of the commonsense view of perceptual experience, nor hence, right within the terms of the Analytical Approach, but insofar as he has focussed on the feature which philosophical appraisal suggests is essential to perceptual experience, beliefs. However, as has previously been observed, the oddity of the chicken sexing case, to which ordinary perceptual experiences are assimilated on Armstrong's account, is a strong reason for concluding that the two cases are in fact different. It could even be claimed that the distinction is logically immune from doubt, in that assimilating ordinary perceptual experience to what occurs in the chicken sexing case is in effect a denial that there are conscious perceptual episodes, and such a denial of consciousness contradicts presuppositions of rational discourse. In any event, it is arguably preferable to minimise the number of existing beliefs that must be regarded as false in defending materialism, for the more of them that must be so viewed the stronger is the claim that it is materialism that is, on balance, to be viewed as false, so that an account of perceptual experience which, unlike the Belief Analysis, avoids CSO should still be provided in defending materialism, if at all possible.

One such alternative that is back in the reckoning is the Adverbial Analysis. That account of perceptual experience was said to succumb to

CSO in that it did not allow us the ability consciously to determine what makes it true that we are sensing in a particular manner, whereas beliefs acquired in ordinary perceptual experience are ones where we do have the ability consciously to determine what made the belief in question true. The Adverbial Analysis was, therefore, susceptible to CSO for making ordinary perceptual experiences belief acquiring episodes just like the chicken sexing case in that respect.[2] The refutation of GPA, and, through that, the Acquaintance Analysis, however, showed that in ordinary perceptual experience, there must be beliefs where we are not able consciously to determine what makes them true, namely, ones that are applied as conditions of the occurrence of perceptual experience itself. Thus it could be suggested that the Adverbial Analysis may be reinstated, having been initially rejected on the basis of a contrast between the chicken sexing case and ordinary perceptual experience that did not withstand critical scrutiny. What may, after all, make ordinary perceptual experiences distinct from what occurs in the chicken sexing case is that sensing is present in the former case but not the latter. Now freed from the constraints of the Analytical Approach, which required both ontological neutrality in the specification of sensing and the preservation of ordinary beliefs about perceptual experience, an account of the introspective awareness of sensing may be given, by which its introspectible presence in ordinary perceptual experiences distinguishes them from the chicken sexing case. Thus, the situation can now be said to be one where introspectible features distinguishing different manners of sensing are physical features of brain processes, but these are misinterpreted by percipients in their introspection of perceptual experience, as involving spatial objects, often of a sort that physical science does not recognise, as with qualia and the like. No such misinterpreted introspectible features are involved in the chicken sexing case. This argument, of course, also trades on the lack of any philosophically telling immunity from

doubt attaching to existing beliefs about perceptual experience.

We have, however, recently indicated that the number of existing beliefs that materialism requires us to suppose false should be minimised, and this proposed reinstatement of the Adverbial Analysis is far from achieving that purpose. For, as previously noted,[3] the Adverbial Analysis commits us to all intents and purposes to a Representative Theory of Perception. Sensing is a state which represents the environment. It counts as the experience of the environment, not through being in itself a relation of the environment to consciousness, for it is a non-relational occurrence, but rather through the manner of sensing caused by an object in the environment corresponding to a feature the object actually has. The awareness of the environment is thus mediated by sensing in the Adverbial Analysis just as in the usual version of the Representative Theory of Perception that awareness is mediated by the awareness of private objects that represent environmental ones. Both accounts are equally contrary to the ordinary view that perceptual experience provides a direct awareness of environmental objects; that is, an awareness that is not via any conscious state that is distinct from the awareness of such objects. Insofar, therefore, as it is desirable to minimise the number of existing beliefs that must be regarded as false, this departure from the ordinary view counts against reinstating the Adverbial Analysis. So, too, does the other reason mentioned in Chapter 4 which survives criticism of the Acquaintance Analysis - namely, the inability to accommodate all the different kinds of perceptual experience that an act-object analysis allows the identification of. Adverbial descriptions were found to have difficulty in distinguishing, for example, the simultaneous experience of a round, red afterimage and a square, green one, from that of a round, green and a square, red one.

The moral that, it seems, is to be drawn from the fact that there are still reasons to avoid both the Belief Analysis and the Adverbial Analysis

in defending materialism is that an act-object view of perceptual experience should be retained. Only in this way, it seems, can the assimilation of ordinary perceptual experience to what occurs in the chicken sexing case be avoided, an assimilation which remains the downfall of the Belief Analysis, without the unacceptable belief revisions that the Adverbial Analysis requires. What, in other words, is required is an account of perceptual experience based upon proposition A1 of the Acquaintance Analysis, the proposition according to which in all instances of perceptual experience, there is an act of awareness by which content is apprehended, the content consisting of spatio-temporal objects or qualities. Any such awareness of content would have to be belief or classification-laden awareness, of course, and what is thus being suggested is an account of perceptual experience essentially similar to that offered by Kant, with his distinction between 'intuitions' and 'concepts'. The Kantian conception of perceptual experience has, however, itself been subject to criticism both in the past and in recent times. In advocating such an account it is thus necessary for these to be rebutted, and to this end, more needs to be said about the Kantian conception.

3. A Kantian view of perceptual experience, and objections to it

According to Kant, perceptual experience is composed of two elements, intuitions and concepts. Neither of these by themselves suffice in the account of such experience, as is emphasised by the two famous slogans 'intuitions without concepts are blind' and 'thoughts without content are empty'.[4] The first makes a claim equivalent to our conclusion that all awareness of content of any specificity presupposes classification, or in other words, the application of concepts. The second slogan, that thoughts without content - supplied by intuition - are empty, can be construed as making the same point about perceptual experience that we have made in opposition to the Belief Analysis by reference to the chicken sexing case: the point that beliefs do not divide into perceptual experience without remainder. For, 'thought' here may be identified with

the application of concepts, or the occurrence of beliefs, and the emptiness of thoughts without content can be said to be exemplified by the situation in the chicken sexing case, where there is no consciously apprehended content to which beliefs are applied.

That intuition is the component in perceptual experience by which, in the Kantian account, content is presented to consciousness, as in A1 of the Acquaintance Analysis, is made apparent by Kant's introduction of the notion. According to Kant,

> In whatever manner and by whatever means a mode of knowledge may relate to objects, intuition is that through which it is in immediate relation to them, and to which thought as a means is directed. This again is only possible, to man at least, in so far as the mind is affected in some way.[5]

These remarks bear upon perceptual experience since this can claim to be a mode of knowledge if anything is, being the essential means by which we find out about objects in the world. The suggestion, then, is that intuition is the component of perceptual experience through which it involves, contrary to the Adverbial Analysis, an immediate relation to objects. It is also that on which thought, or the application of concepts, comes to bear, so that a specific awareness of content is had, and the intuition ceases to be 'blind'. Finally, intuition involves the mind or consciousness being affected in some way, which presumably means affected in some way by the object of intuition. This latter causal relation between object and consciousness may, further, be regarded as a means of explaining the conscious apprehension of content as envisaged in A1. It can also be said to recognise what was previously referred to as the causal logic of sense perception.[6] It was noted earlier that it is a matter of little controversy in the philosophy of perception that we may only be aware of an object in sense perception if a certain causal relationship exists between the object experienced and the percipient, by which the perceptual experience arises.

It appears, then, that the Kantian view of perceptual experience does indeed correspond to that advocated in the previous Section in that: (1) the intuitive component embodies the idea that perceptual experience involves a conscious apprehension of content, and an immediate relation to the objects concerned rather than the indirect one implied by the Adverbial Analysis, which we concluded was to be avoided; and, (2) such awareness, if it is not to be 'blind', or, as we have said, totally devoid of specificity, must be subject to concepts. The Kantian account further adds that conscious apprehension of content is in accordance with the causal logic of sense perception, in that conscious apprehension of content is a matter of a causal connection between objects and consciousness. As we said, however, the Kantian account has been challenged, and, since the view we have advocated above is essentially the Kantian one, if that is to be rejected, then so must ours.

A prominent recent critic of the Kantian view of perceptual experience has been Rorty, in whose book Philosophy and the mirror of nature both the Russellian view, as embodied in the Acquaintance Analysis, and the Kantian alternative are equally rejected.[7] To appreciate the first of his criticisms of Kant that shall be considered here, further Kantian terminology needs to be introduced. First there is what Kant calls 'the manifold of intuition', by which is meant the objects presented to consciousness in intuition. The application of concepts to intuition so as to yield a specific experience, or 'representation', as Kant calls it, is, further, referred to as 'synthesis'. Adopting these terms, Rorty objects to intuition by asking,

> How do we know that a manifold which cannot be represented as a manifold is a manifold- ...(for)... if we are going to argue that we can only be conscious of synthesised intuitions, how do we get our information about intuitions prior to synthesis?[8]

The objection here is to the effect that if we cannot experience the

objects constituting the manifold of intuition without the addition of concepts, there is no means of knowing that there is such a manifold, and hence no reason for supposing that there is one. This is, in fact, a long-standing criticism of Kant, and one that spawned the Idealism of Hegel, who accepted the essential role of concepts, in perceptual experience - indeed, in any experience - but combined this with a rejection of the manifold of intuition to draw the conclusion that there is no mind - independent reality.[9] Rorty, for his part, rejects Idealism in addition to the Kantian view and the Acquaintance Analysis, in support of his conclusion that philosophy can add nothing of significance in connection with human knowledge, perceptual or otherwise, to what is provided by the current state of empirical disciplines.[10]

Without entering into a consideration of Rorty's rejection of epistemology, which is beyond the terms of the present discussion, reasons may be presented for rejecting the criticism of Kant which is a major plank in his argument. The argument to which both Rorty and Hegel subscribe is that there is no reason to suppose there is a manifold of intuition because we cannot experience it in its own right, but only through the application of concepts. This is the point about our not being able to experience the manifold as a manifold, since we only experience the product of synthesis. The implication, therefore, is that only a non-belief-laden awareness of content would be sufficient to assure us that a manifold of intuition exists, but no such specific awareness is possible in the absence of the application of concepts. The appropriate response to this 'Catch 22' is to challenge the assumption that the only sufficient reason for admitting a manifold of intuition is the ability to have a non-belief-laden awareness of it. The case for its admission may instead be based not on such experiential evidence, but upon the consequence of denying its existence, which is the inability to avoid the assimilation of ordinary perceptual experience to what takes place in the chicken sexing case, without requiring the

abandonment of other beliefs that are not themselves to be repudiated without sufficient reason. That is to say, we need intuition to distinguish ordinary perceptual experiences from what occurs in the chicken sexing case without recourse to, say, the Adverbial Analysis of perceptual experience, with its commitment to a Representative Theory of Perception. The argument for intuition is, thus, not a direct proof of its existence but a transcendental argument, as discussed in previous Chapters, drawing attention to the consequences of supposing something not to be the case.

If Rorty's argument against the manifold of intuition considered above does not succeed, there are, however, other objections to intuition that he considers tell decisively against it. Thus he has challenged the very significance of the notion, arguing that 'Insofar as Kantian intuition is effable, it is just a perceptual judgement and thus not merely intuitive. Insofar as it is ineffable, it is incapable of having an explanatory function.'[11] In relation to this objection, it is certainly correct to say that what may not be described may perform no explanatory function, since, of course, it would be totally unclear what was being invoked by way of explanation. But the question is why it should be assumed that if intuition admits of description it reduces to perceptual beliefs. The concepts applied in perceptual experience, or their verbal expressions, Rorty seems to assume, characterise only beliefs that are held in perceptual contexts, but it may be asked why those concepts may not be supposed equally to characterise the particular intuition had in a given case. Just because there is no way of experientially verifying that a particular concept accurately characterises the content of intuition, since the application of concepts is essential to the experience of content, does not mean that it is not that content that is being characterised, nor indeed that the characterisation is, necessarily, inaccurate.

What, however, may be behind Rorty's apparent reluctance to countenance significant specification of the manifold of intuition is an aspect of Kantian epistemology that it is not the intention to retain here. Kant sought to prove that the concepts we apply to intuitions do not actually characterise the objects presented, arguing from the basis of proofs that space and time do not do so.[12] Were this the case, none of the essentially spatio-temporal characterisations we apply to objects would actually apply to the manifold of intuition, and then it may indeed be contended that we lack the means to specify it. It is against this backgound that a rejection of the manifold of intuition, such as was associated with Hegel, appears quite reasonable. But another response is to reject the arguments by which Kant purports to show that our concepts are inherently unable to characterise it. In this regard, it is generally, and with good reason, agreed that Kant's attempts to prove that space and time do not characterise independent reality do not succeed. There is also reason to think that something like our existing beliefs must be true to the extent that this must be the case as a condition of our survival.[13] This line of transcendental argument, of course, failed to secure beliefs that are required in opposition to EM, but it still provides a positive argument against Kant.

If fault may thus not be found with the idea of characterising, at least to some degree of accuracy, the manifold of intuition, it might still be objected that another aspect of the notion of intuition remains ineffable and that is consciousness itself. As previously remarked, in itself, consciousness is a 'transparent and featureless' notion. But the mere fact our existing concept of consciousness carries no specific commitments about the intrinsic nature of this phenomenon, and is from that point of view ineffable, does not imply that the notion is illegitimate. The phenomenon of consciousness admits of extrinsic characterisation, by reference, for example, to conditions associated with its occurrence,

such as the behavioural manifestations of consciousness, and the function of apprehending content, by which the individual's own consciousness manifests itself. The fact that the notion of consciousness thus avoids the charge of being ineffable through admitting of intrinsic characterisation, means, of course, that room is left for a materialist account of its intrinsic nature, so rendering that also effable without requiring existing beliefs to be withdrawn as false. Such an account will, indeed, be offered in the next Section.

This completes a review of the recently canvassed, but long standing objections, to the Kantian conception of perceptual experience advocated here. We have seen (1) that the criticism that we may not experientially verify the existence of the manifold of intuition, because of the inevitable contamination of all experience of any specific content by beliefs, did not succeed as the case for intuition does not rest on such proof. Rather, it rests on transcendental argument. (2), there is no need to accept that intuition admits of no significant specification, and is hence invalid. For, while this criticism certainly applies to Kant's own treatment of intuition, since, according to him, the manifold of intuition does admit of no significant characterisation in terms of concepts available to us, there is no need to accept his view. There are, however, other criticisms that may still be raised.[14] First, it might be suggested that to suppose the Kantian view of perceptual experience advocated here deals better with the chicken sexing case than does Armstrong's is a mistake; and, secondly, problems may be raised about the idea that perceptual experience involves an immediate relation of the mind to objects. The former will be addressed in the next Section, when a final account of how the chicken sexing case is to be distinguished from ordinary perceptual experiences will be presented.

4. The Kantian view and CSO

We have seen that it is the intuitive component in the Kantian account of perceptual experience which corresponds to A1 of the Acquaintance Analysis, and it is this component that is called upon to distinguish ordinary perceptual experience from what occurs in the chicken sexing case, on the basis of the presence in, the former case, of a conscious apprehension of content. Unfortunately, further reflection seems to suggest that intuition does not offer anything more to the account of perceptual experience than does the Belief Analysis, which, of course, itself succumbs to CSO. For, the net contribution of intuition is a causal relationship between objects and consciousness by which it may be claimed that objects are consciously apprehended. But then the Belief Analysis, as Armstrong emphasises, accepts the causal logic of sense perception[15] also, and, as we saw, insists that perceptual experience is the result of the action of the world, or, more specifically, the objects in it, on the percipient. On the Belief Analysis, perceptual experience, as a conscious occurrence, involves the consciousness of beliefs we are caused to hold by such action, so that there is, in effect, a causal chain between object and consciousness here as in intuition. Thus, the constituents of perceptual experience are just the same on the Kantian account as in the Belief Analysis, and the difference that was supposed to be drawn by the intuitive component in the former account is thereby shown to be illusory.

However, this is perhaps too hasty a conclusion to draw. For, although there is, both in the Kantian account and the Belief Analysis, a causal chain between object and, ultimately, consciousness, the function the chain performs in the two cases differs. On the Belief Analysis, the role of the chain is to cause beliefs to be held which are, in turn, present to consciousness, and it is purely in terms of differences in beliefs that different perceptual experiences are consciously different. By contrast, on the Kantian account it is the object itself, and not

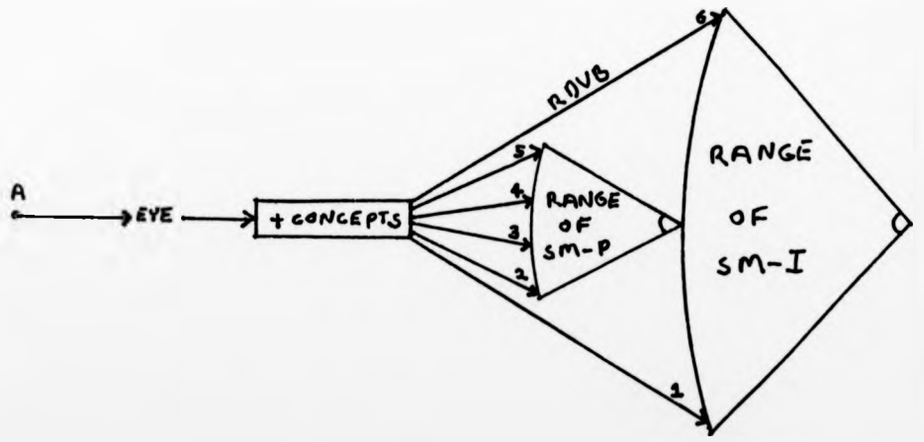
merely beliefs about it, that is made present to consciousness by the causal chain, and makes the experience in question consciously different from any other. In short, on the Belief Analysis, beliefs alone are presented to consciousness, while on the Kantian view what is presented is the object with the addition of beliefs. It might, however, be responded that a purely verbal distinction is being offered here - all we have are the same components described in two different ways. But then those descriptions may be said to distinguish different views of what those components in fact do, so the contrast is not insignificant.

What may be pressed, though, is the question of how a causal chain between object and consciousness functions to present an object, with the addition of beliefs, to consciousness, rather than merely causing beliefs to be held which are then what are present to consciousness. The need to give substance to this contrast is made acute by the fact that in the chicken sexing case itself, beliefs are acquired as a result of a causal chain between features of an object and the percipient, which results in beliefs being present to consciousness. Perhaps the only possibility is to postulate that the conscious apprehension of content, as envisaged in A1, involves something other than a mere causal chain between object and consciousness - perhaps some mysterious outreach by which consciousness does literally apprehend its object. The latter will be discussed in the next Section in connection with the idea that we are immediately aware of objects at a distance from us. It is, however, possible to distinguish ordinary conscious perceptual experiences from what occurs in the chicken sexing case, and from the account of those experiences offered by the Belief Analysis, without any such recourse. To do so, it is necessary to draw upon the 'scanning machine' model of consciousness which Armstrong himself suggests.[16]

Armstrong indicates that scanning mechanisms provide a good analogy for how consciousness operates. The awareness of some content or other

can be viewed as a matter of consciousness ranging over some domain, and detecting constituents of it through being causally connected to them, as with the operation of scanning devices like radar. There are, moreover, different levels of scanning. In perception it is the environment that is scanned, while in introspection it is mental states, like perception, which are themselves scanned. Moreover, given the previously mentioned openness of the concept of consciousness with regard to what that phenomenon is in its intrinsic nature, we are at liberty to propose that the scanning mechanisms which are involved in the different sorts of consciousness that humans enjoy, such as perceptual experience and introspective consciousness, consist of physical mechanisms in the brain. On this basis, the chicken sexing case may be distinguished from ordinary perceptual experiences, while accepting that both involve a causal chain between object and percipient, by distinguishing between the end result of those chains on the basis of the brain scanning mechanisms with which they connect.

What is envisaged here may be illustrated by the following diagram:




KEY: SM-P = SCANNING MECHANISM FOR PERCEPTUAL EXPERIENCE

SM-I = SCANNING MECHANISM FOR INTROSPECTION

RDVB = READINESS FOR DISCRIMINATORY OR VERBAL BEHAVIOUR

Object A is assumed to have features 1-6, and the ability of the subject to detect those features depends upon the causal chain from A to the eye, which continues to the brain, where, first, concepts are applied, in accordance with the conclusion that any specific awareness of content in perceptual experience presupposes the application of concepts. However, features of A are only consciously apprehended in perceptual experience if they give rise to brain processes that fall within the range of the scanning mechanism SM-P, which is assumed to mediate perceptual experience. (It might have been appropriate to distinguish different mechanisms for different modes of sense, but this would unduly complicate matters). Thus, features of A 2-5 are ones that are consciously apprehended in perceptual experience, whereas features 1 and 6 are not because they lie beyond the range of SM-P. They are, however, registered in the brain other than through perceptual experience, insofar as they create a readiness for discriminatory or verbal behaviour (RDVB), which falls, like perceptual experience itself, within the range of the higher level scanning mechanism, SM-I, which mediates introspective awareness. On this basis, the perceptual episode occurring in the chicken sexing case may be introspectively distinct from perceptual experience, for the features that enable male and female chickens to be told apart may be represented as ones like 1 and 6 in the diagram. There is no conscious apprehension of those features since they do not fall within the range of SM-P, but we are introspectively aware of readinesses for discriminatory and verbal behaviour that result from the action of those features. Other features of particular chickens, such as their yellow colour, will be within the range of SM-P, and we will introspectively be aware of them as things we consciously apprehend.

It might be objected that this account of the distinctness of the chicken sexing case is an ad hoc one, something made up to save the Kantian account which we are advocating from reducing to the Belief Analysis. But to this it may be responded that the oddity of the

chicken sexing case is surely an indisputable fact, and something like what has just been suggested is required to account for its oddity, within a framework that is compatible with materialism. However, if this line of objection may thus be disposed of, it still might be questioned whether justice has been done to the notion of conscious apprehension of content and, in particular, the idea which both Kant and commonsense recognise, that in perceptual experience our awareness of objects is immediate. This objection, consideration of which will pave the way to a resolution of the problem about the experienced location of sensations, will be addressed next.

5. The awareness of objects at a distance

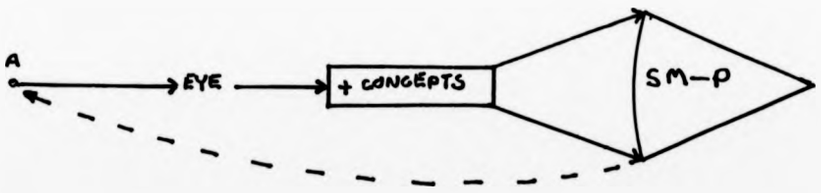
It has seemed to philosophers that the very fact that perception of objects in the environment is the result of a causal chain between object and percipient means that we do not have an immediate awareness of such objects, nor even can it be them that we consciously apprehend. Mundle, following Russell, states the problem as one arising from the fact that,

> Any perception comes at the end of a chain of physical events leading from the object to the brain of the percipient; so we cannot suppose that at the end of the process, the last effect suddenly jumps back to its starting point, like a stretched rope when it snaps.[17]

The image of perceptual experience as act-object in character, and as a matter of conscious apprehension, is here taken quite literally. Awareness is an act which reaches out to apprehend its object just as a policeman might reach out his arm to apprehend a villain. And the problem is that there is no outreaching physical event that may be identified which may be represented as fulfilling this role. Relating the problem specifically to the account of perceptual experience just presented, the difficulty is that it appears that if consciousness is a scanning mechanism in the brain, all that it can immediately

apprehend are brain phenomena, for there is no extension to the mechanism by which things in the environment are reached. There is no problem if the claim is that we are only aware of beliefs about objects, in perceptual experience, for such beliefs may be instantiated as brain phenomena and hence eminently within the range of a brain scanning mechanism; nor, similarly, if the Adverbial Analysis is adopted, for sensing is able to be identified also with brain phenomena. The question arises, therefore, as to whether the account of perceptual experience we are suggesting must, after all, be abandoned on grounds of incoherence, in favour, perhaps, of the previously rejected Adverbial view.

Now the assumption on which the above objection to our Kantian account of perceptual experience rests is that the inward causal chain recognised in that account, as in the above diagram, and also by physical science, is insufficient for the occurrence of the awareness of environmental objects like A . Its only function, it seems, can be to instigate the outreaching act of awareness, as in the following simplified version of the latter diagram:




The dotted line represents the necessary but absent extension of SM-P into the environment whereby consciousness might directly apprehend A . But the necessity for such an outreach of consciousness may be questioned.

The motivation behind the 'policeman's arm' conception of consciousness is that our experience is of a direct confrontation with objects.

We have no experience of an intervening causal chain by which we are aware of the objects that feature in our perceptual experience, and it is perhaps this commonsense conviction which Kant recognises when he speaks of intuition as an immediate relation to objects. Thus there is either a mysterious outreach of consciousness that brings it into direct contact with environmental objects - one quite unknown to science - or the objects we experience must be nearer at hand, in the mind or brain, as the Representative Theory of Perception has it. Or, of course, we abandon an act-object conception of perceptual experience altogether, as in the Adverbial Analysis - itself a form of representative theory. If, therefore, an alternative account of our experience as of a direct confrontation with environmental objects may be offered, then we may be spared any of these unpalatable options. And just such an alternative may be offered by reference to the involvement of belief in perceptual experience.

It is now some time since we were obliged to recognise the essential role of conceptualisation, classification, and hence belief, in perceptual experience. The experience of recurrent properties of different sorts, of everyday physical objects, and of ourselves as experiencing subjects, have all been shown to depend on the classifications or concepts we apply to the content of perceptual experience, or, in other words, a matter of the beliefs we hold in relation to it.[18] Thus, it may similarly be claimed that our experience of immediate perceptual confrontation with objects at a distance is to be explained in terms of the belief that we are in immediate confrontation with such objects. It is, indeed, in the interests of evolution that our awareness of objects in the environment be as of immediate confrontation with them, for it is the objects themselves that we must take account of if we are to survive, not any causal processes that underlie this experience. And, accordingly, it may be proposed that the structure of the brain has evolved so

that it is an involuntary matter that whenever our sense organs are activated,we apply beliefs that yield the experience as of direct confrontation with objects in the environment, so that the knowledge that we do not have such direct confrontation with them, due to the intervention of a causal chain, makes no difference to our experience. We shall have more to say about such involuntary application of beliefs in the next Section where we deal with the problem about the experienced location of sensations.

The role of belief in determining how we experience the content presented in perceptual experience as being is, then, the key to the problem of the experience of ourselves as in immediate confrontation with objects at a distance. This solution was, of course, unavailable to Russell with his commitment to a non-belief-laden awareness of content, and the problem may, indeed, be seen as a by-product of the Acquaintance Analysis. It must be emphasised, moreover, that although we are claiming that, contrary to appearances, the awareness of objects in perceptual experience is not immediate, it is still objects in the environment that are experienced, and not any other objects or episodes that represent them. We thus still avoid any commitment to the Representative Theory or its Adverbial Analysis variant. The brain is able to scan the environment, but does so by means of the inward causal chain which science and the Kantian account recognise, rather than any mysterious outreach of consciousness. The Kantian view of intuition as a direct relation of the mind to objects has, however, proved unsustainable, at least in conjunction with the idea that the objects of intuition are environmental ones. For Kant himself, though, the objects of intuition are 'things in themselves' that do not exist in space and time, and hence can scarcely be called 'environmental'; but this merely emphasises that although the account we have presented is,in important respects,suggested by Kant,it does not embrace his views wholesale.

Against the above solution to the problem of the awareness of objects at a distance, it might be objected that the remarkable power of synthesis that it ascribes to perceptual beliefs, by which a causally mediated presentation of objects to consciousness appears as a direct confrontation with them, makes intuition too much of a sleeping partner in the account of perceptual experience. But this point may only be pressed given the availability of a defensible alternative, when we have found that a purely belief-based account of perceptual experience is unacceptable by virtue of CSO; the Acquaintance Analysis founders for the opposite reason of excluding beliefs from perceptual experience; and no form of representative theory - certainly not the Adverbial Analysis-proved acceptable. In short, the present account is the one to which it appears the least objection may be raised.

With this, the treatment of the problem of awareness of objects at a distance will now be applied to the location objection.

6. Disposing of the location objection

Extreme examples of the experience of sensations at locations where there is no physical phenomenon with which to identify them were afterimages and phantom-limb pains. Clearly, if these cases may be accommodated within a framework compatible with materialism, any other, less extreme, ones will likewise do so, and our consideration of the experience of objects at a distance suggests how they may be approached. For, if it is the beliefs we apply that determine how we experience the content to which we are related in perceptual experience, all that needs, it seems, to be said in cases which present the location problem is that we apply false beliefs to the content concerned, causing us to experience it as located where it is not in fact located. Thus it may be said the content to which someone is related in experiencing an afterimage is retinal activity, for it is known that the experience of an afterimage is caused by malfunctioning in the retina; and similarly what is experienced in the phantom-limb

pain case is activity in the nerve endings at the point of amputation. But, in each case, false beliefs are occasioned which cause these respective contents to be experienced at other than their real locations.

As in the previous Section, the question may be raised as to why, if we know the beliefs that mediate these experiences to be false, we do not simply revise the beliefs we apply in these circumstances and thereby correct our experience. And, again, the role of evolution in so structuring our brain that certain of the beliefs we apply are involuntary may be invoked. Just as it was argued in the previous Section that evolution has structured the brain so that we believe ourselves to be in immediate confrontation with environmental objects, even though we know through reflection that this is not the case, so it may be said evolution has similarly brought it about that whenever the causal chain that results in perceptual experience through any given sense is activated, we believe ourselves to be experiencing something in the environment, and the afterimage and phantom-limb pain cases may be accommodated as ones where the short-circuiting of the usual causal chains results in objectsnot being experienced as at their true location. In the afterimage case, the visual chain is short-circuited since the input from the retina to the higher reaches of the brain is not brought about by the action of an environmental object, as in the usual case, but by activity in the retina itself. The effect at the higher levels of this retinal activity may be conjectured to be just the same as if it were produced by an environmental object, and hence, involuntarily, the belief is applied that we are experiencing an object in the environment, and retinal activity comes to be experienced as on a distant wall, say. In the phantom-limb case a very similar explanation of the pain experience may be provided. The disturbance at the nerve endings initiates a causal chain that would otherwise have been initiated

by nerve activity in the limb that has since been lost, and hence occasions an involuntary belief that there is a pain in the empty space that the limb would have occupied.

The account offered thus assumes a distinction between involuntary beliefs that evolution has impressed on the brain, and ones that we acquire on the basis of rational reflection about the world, with the former determining our experience. This might be accused of being an ad hoc accommodation to awkward cases, but it does, in fact, seem a defensible distinction to draw. For, it may surely not be proposed that all of the beliefs that we hold have been acquired as a result of rational reflection ; certain beliefs are, as we have seen, presupposed for such self-conscious activities. It is reasonable, then, to suppose that we do have certain in-built belief dispositions. The distinction finds support also in the application of computer programming analogies for human cognitive functioning - the distinction between 'ROM' and 'RAM' components in computer memory, with the former unmodifiable and the latter subject to alteration, seeming to correspond closely to that between involuntary and rationally revisable beliefs that we apply to the content of perceptual experience.

A comparison may also be drawn at this point between the treatment of the location problem that we have suggested and Armstrong's belief - based treatment of the phenomena concerned.[19] Our suggestion is that our experience of the afterimage, as an example, is an instance of contradictory beliefs: we experience an object as at a location where we know reflectively that there is no such object, and our experience is the result of a belief we involuntarily apply which mediates that experience. Armstrong's approach is to treat the experience of an afterimage as a case of acquiring a 'potential belief', an occurrence that would be the acquiring of a belief but for the intervention of beliefs contradicting the one that would otherwise have been acquired. Could we not have followed him in

this, while retaining the intuitive component? It appears not, because, for one thing, a potential belief would result only in a potential experience, when it is obvious that the experience of an afterimage, or a phantom-limb pain, is just as vivid an experience as anything else. Then also there is the previously remarked upon awkwardness, not to mention the obscurity of referring to 'an occurrence that would be the acquiring of a belief but for...'

We are able, then, to explain the experience of objects as at locationswhere there is no corresponding physical phenomenon with which they may be identified, by appealing to the role of beliefs that are applied involuntarily to the content of perceptual experience. There is no need then to admit non-physical objects as what is experienced in these circumstances. Only if the beliefs concerned could be rendered logically immune from doubt would we be obliged to admit such objects, but the argument of the preceding Chapters suggests that there is no basis for such an immunity. Since, moreover, the explanation of the appearance of objects at the above problematic locations is in terms of beliefs, and there is no intrinsic problem about identifying beliefs with physical phenomena, insofar as the instantiation of a belief may be a purely physical event within the spatial structure of the world, it is wholly compatible with the aims of materialism formulated here.

We have, so far, concentrated on the most extreme instances where the location objection arises, and something needs, finally, to be said about how other cases may be accommodated which do not necessarily imply a disordering of the perceptual apparatus, as was appealed to above. A typical example of the cases with which we are now concerned is where the position within the body at which a pain is experienced does not correspond exactly to that of the physical phenomenon that constitutes the actual content of the experience. Here there may be nothing identifiably wrong with the nervous system at the time the experience is had, so an appeal to disordering in inappropriate. Instead, we may

explain the disparity between experienced and actual location by saying that evolution has only built a certain degree of accuracy into the classifications that the brain applies in our experience of the location of pain, so there are likely to be instances where there is not an exact correspondence between experienced and actual locations of the sensation.

7. Doubts concerning the phenomena EM substitutes for qualia

We turn now to whether perceptual experiences that are currently believed to be the experience of qualia may be reinterpreted as the advocate of EM would propose. This question may be brought into focus by taking a particular example, and asking whether what we experience when we see, say, a yellow afterimage or a yellow object in the environment, may be represented as certain qualeless physical phenomena rather than the common quale of yellow. As we said, while it may not be indubitable that such a quale is experienced, it might still be a matter of doubt whether the materialist's specific alternatives are acceptable. One immediate problem that the latter example poses is the fact that whereas yellow environmental objects and yellow afterimages are experienced as having a common quality, as things stand, the quality we would refer to as the quale of yellow, the rejection of qualia in favour of purely physical phenomena does not enable any correspondingly common intrinsic quality to be recognised. For, while the quality displayed by yellow environmental objects is, according to EM, a certain wave-length composition of electromagnetic radiation, a quite different quality will be invoked in the case of a yellow afterimage, since there is no emission of such radiation there. Afterimages are experienced, as we have seen, due to aberrant cell firing in the retina. Moreover, it is also known that no one composition of electromagnetic radiation is common to all yellow objects,[20] so the situation is that the elimination of qualia will be in favour

of a class of physical phenomena, a class embracing a range of electromagnetic radiation as well as certain patterns of retinal cell activity.

Now, a short response to the fact that EM thus may not propose a one-to-one substitution of qualia in favour of physical qualities, but only a one-to-many substitution, is to deny that it poses any problem. It is simply a fact about this ontological revision, not an objection to it. But objections may be anticipated to such a treatment. Thus it could be responded that the fact we experience afterimages and the surfaces of environmental objects to display the same quality indicates that they do have some quality in common, and even if we do not insist that the quality be a quale, the substitution that EM proposes will still be inadmissible.

However, there are reasons to reject this criticism. In particular, the fact we experience items as having a quality in common does not entail that they do have one; the only common property may be the common way we experience them. This much can certainly be claimed given the lack of success we have had in attempting to prove that beliefs relating to the content of perceptual experience are logically immune from doubt. It can, moreover, be argued that our experience of items like yellow surfaces and yellow afterimages as having an identical quality is a matter purely of our existing way of conceptualising the content concerned, such that were this to change, they would no longer be experienced as the same.

To see how this may be the case specifically where our current experience is as of qualia, previous discussion of our experience of these items must be recalled. Earlier it was argued that the latter experience results from the application of classifications to the content of perceptual experience that mark the limit of our ability to make discriminations within that content in the absence of background assumptions, assumptions to the effect that items are present

that we are incapable of discriminating in their own right.[21] The position then is that we experience afterimages and surfaces as displaying a common quale because our perceptual apparatus does not allow us to experience them as intrinsically different in the absence of background assumptions, and the classifications we currently apply do not involve such assumptions. If, therefore, we were to apply different background assumptions, to the effect that the quality displayed by a yellow afterimage was a certain pattern of cell firing and, in the case of a yellow surface, a certain wavelength composition of electromagnetic radiation, then our experience in each case would no longer be as of the same simple, homogeneous, non-physical quale, but as of these complex physical qualities. This may only be dismissed if either background assumptions were themselves illegitimate, or the substitution of classifications employing background assumptions for ones that do not do so was itself inadmissible. But then it was shown in the previous Chapter that background assumptions are indispensable in our conceptual scheme, and the proposed substitution in the present case of classifications employing them for ones that do not may only be excluded in principle, from a rational point of view, at least, if it were proved that classifications not implying background assumptions are indubitably true in relation to the content concerned; but we have been unable to obtain any such proof. The only further recourse, in opposition to such a substitution leading to transformed experience, would be to deny the belief-ladenness of perceptual experience, but such a denial foundered with the Acquaintance Analysis.

It might still appear totally implausible to propose that our experience may be transformed so as to be as of the physical phenomena EM proposes and not qualia. Any such appearance may not, however, be ascribed to the indubitable presence of qualia as the content of our experience, and can instead only be ascribed to an inability to apply substitute classifications by which the transformation may be effected.

Such an inability might perhaps then be explained similarly to the experience of sensations as at locations where there are no physical phenomena with which they may be identified, a matter of the structure of the brain being such that we involuntarily apply classifications that cause us to experience the world as being other than we believe it to be on the basis of rational reflection. Just as there was no need to admit the actual existence of sensations of the latter sort, so there is no need to suppose qualia actually exist, in explaining our involuntary experience as of qualia. These appearances are purely a matter of involuntarily applied beliefs. But it could be asked whether the experience as of qualia is the result not of an unmodifiable brain characteristic, but simply that of a habitual way of conceiving the world, which could be overcome with sufficient effort. Advocates of EM such as Rorty and P.M. Churchland, the latter of whose views will be considered later in this Chapter, would seem more inclined to this view of the matter.

The above observations, then, indicate how the experience of qualia - more correctly, the experience as of qualia - may be accommodated within a materialist framework which denies the existence of any such entities. This does not, however, exhaust the difficulties that may be raised for the specific revisions in our way of conceiving the world to which EM is committed. A final objection that warrants attention is that the concepts which EM wishes to substitute for ones that yield the experience as of qualia are at best a partial characterisation of phenomena, and in fact leave quite open the intrinsic nature of that to which they apply. They are hence incapable in principle of taking over the role of concepts relating to qualia, whose function is to characterise, and hence mediate the experience of, intrinsic natures of things. The reason for this deficiency is that physical properties are, it has been held, purely relational.[22] The notion of a wavelength will serve as an

example. It appeals, to begin with, to the concept of length and length, as Smart puts it, 'would seem to consist' in a relation between the object in question and some standard for the determination of length.[23] Similarly, the shape of a wavelength is a matter of the deviation of points on the wave from a straight line. This indicates that the notion of electromagnetic radiation, to which we have appealed as a potential substitute for reference to qualia, is itself essentially relational, for this is simply a particular kind of waveform, and is hence inherently unsuited to substitute for qualia. Similar objections may be raised for all other physical concepts.

Thus it appears that the revisions EM proposes may not proceed. However, an answer that may be suggested to the present objection is one of those offered by Smart himself in response to it, which is to deny that the physical sciences' specification of electromagnetic radiation and the like is purely relational. What is relational is not length or spatial extent as such, but the measurement of length, the assignment of a numerical value to a given length. Similarly, the shape of a waveform could be said to be an intrinsic property of it - conceiving it in terms of deviation from a straight line is again something adopted for the purposes of providing a mathematical description of that shape.

8. The Materialist case completed

The previous Section suggests that the specific revision in our beliefs in relation to Secondary Quality concepts that EM requires, according to which their intrinsic natures are constituted by a veriety of physical phenomena, is a plausible one, even though there is no single physical quality that may be substituted for reference to a given quale. Our current experience as of qualia may, moreover, be explained without recourse to the existence of anything incompatible with materialism, just as there was no necessity to admit sensations located where there is no physical phenomenon with which they may be identified, to explain our experience as of such sensations. An account

has thus been given of perceptual experience in which reference to items that are inconsistent with materialism is avoided. It has, moreover, been based upon a Kantian view of the general nature of that experience that is more in accord with commonsense views and indisputable facts about it, such as the distinctness of perceptual experience from what occurs in the chicken sexing case, than any of the received alternatives. It may further be proposed that a similar approach may be taken with the problem of qualia attaching to imagery,[24] with a suitable analogue for the intuitive component in perceptual experience provided from within the brain itself. Thus, it seems possible to conclude that all the problems that we identified as arising for materialism as defined here may be overcome.

9. A comparison with the views of P.M. Churchland

The defence of materialism thus offered may be compared with the views recently expressed by P.M. Churchland in his book Scientific realism and the plasticity of mind, and in particular, his section on 'the plasticity of perception'.[25] His claim is that of EM: we may revise the conceptual framework that we apply to the content of perceptual experience, substituting the more powerful one offered by modern physical theory for that offered by commonsense. This is something that we have been able to agree with, at least so far as the conceptual framework that may be applied on the basis of rational reflection is concerned; although, to some degree, as we have recently argued, we may involuntarily apply a framework that gives the appearance of there being non-physical constituents in the spatial structure of the world. These appearances, however, we found carry no implication that there actually are any such constituents, so the most important contention of materialism remains - the claim that there is no need to admit non-physical spatial constituents in the account of what there actually is in the world.

Churchland arrives at his conclusion that EM is defensible more rapidly than has been the case here, something attributable, in part

at least, to his dismissal without further ado of the idea that beliefs opposing it may be indubitable, or as he puts it, 'incorrigible'.[26] Our conclusion has been that he is right to reject the appeal to such beliefs, but unless it is shown why it should be rejected, the opponent of materialism may still feel at liberty to make this appeal, as with Cornman's conviction that beliefs incompatible with materialism enjoy 'special epistemic status'. His argument is thus weakened by this omission.

Instead of attacking the notion of indubitable belief, Churchland makes his case for EM through an argument which has as its object to show that what he calls 'the commonsense view' of the meaning of simple observation terms, which is that their meaning is given in sensation, is mistaken. Instead 'their position in semantic space appears to be determined by the network of sentences containing them accepted by speakers who use them'.[27] His reason for rejecting the idea that the meaning of simple observation terms, such as colour terms, is given in sensation is that it is conceivable that the same sort of sensations that guide our colour judgements could, say, have guided temperature judgements rather than colour ones, as would be the case if our eyes were so structured that we saw infrared radiation rather than what is in fact the visible spectrum. He then argues that once it is seen that our existing way of describing the world is just one of a variety that could be keyed into the same range of sensations, the possibility is established of substituting more powerful descriptions, such as the physical sciences offer.[28] The connection between this latter contention and the conceivability of a particular sort of sensation guiding various different basic observation judgements, or determining the application of different simple observation terms, is that the conceivability of this shows that there is no necessity that a particular description be applied given that we have a certain sort of sensation.

Now Churchland does not make clear how exactly the notion of a

sensation is understood here, presumably regarding it as familiar enough, whereas we drew a distinction between sensations and qualia, with qualia introduced as, among other things, the items that guide colour judgements, the qualities by which we distinguish one colour from another. It would seem, then, that Churchland's understanding of a sensation embraces what we have understood by a quale. What, it thus seems, his argument amounts to is not the claim that we may eliminate qualia - they are givens, but that we are at liberty to refer to the quale of a certain wavelength composition of electromagnetic radiation rather than, say, the quale of red. But this means that the physical sciences remain an incomplete account of the content of our experience since, of course, they make no reference to any such thing as the quale of electromagnetic radiation. It may be, however, that Churchland does not intend the having of sensations to be understood as the conscious experience of spatial objects and qualities. For example, he later speaks of 'sensory states' instead of sensations, which is reminiscent of the Adverbial Analysis, and also of 'our sensory states' representing 'systematic discriminatory responses to the environment',[29] which calls to mind the second-order analysis of Armstrong's theory, where perceptual belief acquisition is analysed as the acquisition of discriminatory capacities with respect of the environment. Churchland's defence of EM appears thus to imply either the givenness of qualia or sensations, as the basic awareness of content upon which we erect our beliefs about what else reality contains besides those items, or else the having of sensations reduces to the sort of occurrence admitted by the Analytical Approach theories of perception. In contrast, our contention is that the awareness of sensations or qualia is a product of the beliefs we apply to the content of perceptual experience as much as anything else, rather than being a substratum on which we may construct different systems of belief. The experience of qualia arises

when we reach the limit of our capacity to classify the content of perceptual experience, as determined by the limitations of our sensory apparatus, without the addition of background assumptions - assumptions to the effect that items are present that we cannot discriminate in their own right, and we do not apply any background assumptions. There is no necessity that we always are left with the experience of qualia other than force of habit, or perhaps constraints the brain imposes that may not be overcome by sufficient effort of will in applying background assumptions where none we applied before. In any event, there is no necessity, as we have said, to regard qualia as actual constituents of reality.

## A concluding review of the argument

It seems appropriate in conclusion to supplement the brief introductory outline of the argument presented at the outset, and also the individual Chapter summaries, with a review of the main arguments and conclusions that have, in the foregoing Chapters, provided the substance of our defence of scientific materialism. Some mention will also be made of its wider implications.

The initial concern was to arrive at a definition of scientific materialism that was not prone to the criticisms of being either too strongly reductive, at one extreme, or, at the other, contrived merely to set up a particular problem for the defence of the theory, so defined. Our proposal (Chapter 1) was that materialism be understood as claiming that insofar as there is an accepted view within the physical sciences as to the sorts of entity there are to be found in the essentially spatial intrinsic structure of the world, and of the conditions that suffice for their spatial rearrangements, that view may, as a hypothesis, be regarded as a sufficient one. This claim of sufficiency was, however, shown (Chapter 2) to be open to challenge on the basis of our awareness of content in perceptual experience. In particular, this awareness suggested that the view the physical sciences accepted of the Secondary Qualities was insufficient in that it omitted reference to the qualia they display when we experience them, and similarly failed adequately to accommodate sensations, which not only display qualia, but also occur at locations where there is no physical phenomenon to be found that is at all connected with them. It was concluded that a simpler, more comprehensible, and coherent view of the world resulted from accepting the physical science view, but this was only possible if the contradictory evidence of perceptual experience could be set aside. Qualia and sensations

could form the focus of our discussion of the defensibility of materialism, as mental phenomena other than sensations were either inherently compatible with our understanding of the theory, as with cognitive and volitional mental phenomena, or the problems they posed were subsumable under those of qualia and sensations, as with images.

We then set out (Chapter 3) to consider the first approach to the defence of materialism that the literature suggests, the Analytical Approach, according to which ordinary discourse and commonsense beliefs relating to perceptual experience may be analysed so that there is no commitment to items incompatible with materialism, contrary to appearances. The Analytical Approach was noted to be opposed by a particular view of perceptual experience which has found philosophical favour in the past, and has a good prima facie claim to accord with commonsense. This view was referred to as the Acquaintance Analysis and, according to it, perceptual experience consists in the conscious apprehension of, or acquaintance with, content - in particular, spatial objects or qualities; an awareness that does not involve beliefs as a condition for its occurrence, but nevertheless provides our ultimate reason for accepting beliefs about the world. We then introduced a generic criticism of the Analytical Approach, the chicken sexer objection, which was to the effect that an account of perceptual experience must be rejected if it equated or assimilated ordinary perceptual experience to what occurs in the case of chicken sexing, which Armstrong himself admits to be a peculiar perceptual episode and arguably an instance of unconscious mental events. Commonsense appraisal of the oddity of the chicken sexing case further suggested that the only way to avoid this assimilation is to adopt the Acquaintance Analysis of perceptual experience. In Chapter 4 we proceeded to show in detail how the various instances of the Analytical Approach, the Belief Analysis of perceptual experience and the Adverbial Analysis, and their derivative accounts of Secondary Quality concepts, succumb to CSO. The peculiarity of the chicken sexing case as it strikes

commonsense cannot, in principle, be accommodated by these Analyses, so the Analytical Approach failed on its own terms.

Attention then turned (Chapter 5) to the second approach to the defence of materialism, that of Eliminative Materialism, which holds that if we cannot analyse our existing ordinary concepts relating to perceptual experience compatibly with materialism then we should revise them. A preliminary appraisal of EM conducted in this Chapter indicated that it should be construed, contrary to normal practice, as claiming that we have been holding false beliefs insofar as it has appeared that Secondary Qualities and sensations have characteristics incompatible with materialism, but there are nevertheless such items as Secondary Qualities and sensations. They are, in fact, items having intrinsic characteristics that are fully specified by the physical sciences. The crucial question was then whether we are at liberty to revise our beliefs and descriptions relating to the intrinsic content of perceptual experience as EM requires. Chapter 6 began by exploring Rorty's criticism that philosophical opponents of EM appeal, by implication, to the doctrine of the Given, as grounds for the claim that our existing beliefs may not be revised. Particularly prominent was a conception of the Given which we referred to as the Givenness of Perceptual Acquaintance, which appeals, in effect, to the Acquaintance Analysis of perceptual experience; but the crucial requirement of any appeal to the Given in opposition to EM was that the result be the inability to suppose the beliefs EM wishes to revise to be false. The task then was to formulate a sufficiently strong sense of indubitability for use in what then became the central sense of Givenness, the Givenness of Perceptual Beliefs. Our proposal was that indubitability be construed as a matter of logical immunity from doubt within rational discourse.

The question, accordingly, was whether it could be proved that beliefs relating to the content of perceptual experience that are incompatible with materialism, are indubitable in this sense, and it

was first asked (Chapter 7) whether GPA could do this. It was concluded not to do so–first, because it was shown to be impossible to relate acquaintance logically to beliefs so as to provide the necessary logical immunity, and, second, because the idea of a non-belief-laden awareness proved to be unsustainable; a conclusion of wider significance since it refuted both the Acquaintance Analysis and commonsense intuitions about the oddity of the chicken sexing case.

With the rejection of GPA as a basis for GPB, Chapter 8 considered whether a commonly presented rendering of indubitability provided a more successful alternative, one according to which there are cases - notably, first person beliefs about sensations - where the truth of a belief is logically entailed by the very fact of its being held. It was concluded that this notion of 'inherent indubitability' failed as a means of establishing factual conclusions about what exists in the world, and that such a relation between belief and truth was actually incompatible with factual discourse.

Attention then turned to whether the required logical immunity from doubt could be conferred by transcendental argument, construed as a form of argument which seeks to establish that a certain proposition is logically presupposed by another whose truth is not open to dispute within rational discourse. Chapter 9 addressed two such arguments, the first of which sought to render propositions contradicting materialism logically immune from doubt as presuppositions of our, not rationally disputable, possession of knowledge, and the second sought to do this on the basis of various manifestations of our indisputably successful dealings with the world. Neither was found capable of rendering indubitable specifically the beliefs necessary to refute EM, and no more success was had by a third such argument, discussed in Chapter 10, which drew upon our indisputable knowledge of language, and the 'ostensive tie' conception of linguistic meaning, to sanction the inference that

we know certain facts about the world that contradict materialism.

The review of proofs of indubitability that was thus concluded, appeared to comprehend all the main avenues that are available for rendering the belief in qualia and the like beyond revision. In particular, it embraced views that have arguably, more than any others, encouraged the belief in a fixed and unrevisable ontology in connection with perceptual experience - notably, the Empiricist foundation theory of knowledge (Ch.9), of which Russell's doctrine of knowledge by acquaintance (Ch.7) is a prime example, and the ostensive tie conception of the meaning of descriptive language (Ch.10). Received opposition to EM was also shown to derive from assumptions that are firmly within this tradition, and may be regarded as a legacy of it. Insofar as few philosophers nowadays subscribe to the latter doctrines, our vindication of EM has in some degree involved fighting old battles, but it may be said in favour of this that without highlighting the dependence of opposition to EM on views that are widely and quite justifiably held to be untenable, the claims of EM may themselves appear quite indefensible. And it may be said that advocates of EM, such as Rorty and Churchland, have left themselves open to objection by taking too much for granted concerning the refutation of the thesis of the Given.

At this point, we were able to conclude that there appears to be no basis for the claim that the particular beliefs EM wishes to withdraw as false may not be so treated by virtue of being indubitable. But there still might be difficulty over the coherence of the specific revisions EM wishes to make. It must, in particular, be possible to explain, within a materialist framework, how materialism has appeared false, notably as a result of our experience of qualia and the location of certain sensations. In Chapter 11 these matters were addressed via a consideration of a further outstanding question, that of the form, in the light of previous conclusions, a materialist account of perceptual experience should take. Our proposal was that a Kantian

view of perceptual experience, in which ordinary perceptual experience, as distinct from what occurs in cases like that of chicken sexing, involves a relation between spatial objects and consciousness, but where the resultant consciousness of objects is one that is mediated by beliefs. Each of these functions was proposed to be structurally realised by brain processes, and this paved the way for a materialist account of how things may appear incompatible with materialism. The experience of sensations as at locations other than that of the physical phenomena with which they are to be identified was thus explained as a matter of beliefs that the structure of the brain results in our involuntarily applying. A similar course could be taken with the experience of qualia, but here there was perhaps the possibility of amending classifications we habitually apply, substituting ones laden with 'background assumptions' so that we may experience the world as in conformity with materialism. There was thus no need to recognise anything incompatible with materialism in explaining why the world should appear other than materialism claims.

The findings of the present discussion also have implications beyond the confines of the topic of materialism, notably for the philosophy of perception. For, our criticism of the Analytical Approach involved the rejection of the Belief Analysis of perceptual experience which has, as we saw, been a popular recent approach to the problems of perception. It, further, reinforced doubts concerning the Adverbial Analysis. The conclusion suggested by the present discussion is that a Kantian account of perceptual experience be adopted as a means of accommodating the distinction between how things appear and how they are, without engendering unwelcome ontological or epistemological commitments. This recommendation is made on the strength of our further finding that there remains value, contrary to recent criticism, in the Kantian metaphysics of experience based on the distinction between intuitions and concepts.

## Notes

### Chapter 1

1. The concern with sensations is indicated, for example, by J.J.C. Smart (1) and many subsequent papers, as reprinted in D.M. Rosenthal (ed.) and C.V. Borst (ed.). That with phenomenal qualities or qualia is exemplified by J.J.C. Smart (2) ch.4, by D.M. Armstrong (1), ch.12, and L.C. Holborow. and D.H. Mellor.

2. See J.J.C. Smart (1), (2), (3).

3. See D.M. Armstrong (1).

4. J. Cornman (1), p.10.

5. ibid, ch.1, esp. p.11.

6. ibid, pp11-12.

7. See, for example, J. Cornman (1) pp4-9, for several definitions of which this criticism may be made.

8. D.H. Mellor, p.107.

9. This traditional materialist claim is in particular associated with Hobbes. See eg., D.M. Rosenthal (ed.), p.8.

10. J.J.C. Smart, (3), p.159.

11. D.M. Armstrong (1), p.11.

12. For example, in J.J.C. Smart (1), p.54, Smart suggests that through the progress of science 'even the behaviour of man himself will one day be explicable in mechanistic terms', and in D.M. Armstrong (1), p.52 a clear appeal is made to the success of science in advancing knowledge.

13. D.M. Armstrong (1), p.49. He makes clear at this point that his argument is one that is owed to Smart, and further confirmation of Smart's advocacy of this position is provided by J.J.C. Smart (1), p.54.

14. Putnam advocated the unity of science hypothesis in P. Oppenheim and H. Putnam, a position that may be contrasted, eg., with H. Putnam (1).

15. The view of reduction in science as involving explanation is confirmed by P. Oppenheim and H. Putnam, and elsewhere by, eg.,E. Nagel, ch.11.

16. See P. Oppenheim and H. Putnam, esp. sec.2. Their influence on Smart is confirmed by J.J.C. Smart (1), p.54 where he refers the reader to their article, in support of the view he is presenting.

17. Oppenheim and Putnam, ibid.

18. ibid, p.9.

19. See H. Putnam (1), (2). Similar objections are found in J. Fodor (1), ch.5, 'Special sciences', esp. pp 133-135.

20. H. Putnam (1), sec.3. The lack of brain process regularities corresponding to those of mental phenomena is also stressed in K.V. Wilkes, p.27.

21. See H. Putnam (2).

22. A proposal evident from H. Putnam (1), (2), and (3), and with which J. Fodor (2), for example, concurs.

23. Putnam first introduces Turing machines as an analytical device, in H. Putnam (3).

24. See, eg., R. Harré. In J. Fodor (2), also, the functional conception of psychological states as a basis for psychological explanation is developed.

25. D.M. Armstrong (1), p.82. The gene analogy is presented pp 89-90.

26. See J.J.C. Smart (1), p.61.

27. It has recently been held, notably by Quine, that no absolute identification of the objects postulated by any given theory is in principle possible, and it seems, if this is correct, there may correspondingly be no absolute determination of truths about the world. See W.V. Quine (1), ch.2.

28. cf. R. Rorty (1), p.287.

29. DM can also claim compatibility with recent 'physicalist' views such as the 'token physicalism' espoused by Fodor in J. Fodor (1), ch.5, where the object is not to find physical science regularities coextensive with social science ones - which he rightly concludes is an impossible task, but 'to explicate the physical mechanisms whereby events conform to the laws of the special sciences', p.138. Different such physical mechanisms may provide the means by which different instances - tokens - of particular social science regularities display those regularities.

30. The view of mental phenomena ascribed to Putnam here emerges in H. Putnam (1), (2), (3). It may be noted that in H. Putnam (2), he indicates that he believes a materialist treatment of mental phenomena 'incorrect' (p.408). But it is evident from sec.2 of this article that he has in mind only a version of materialism under which there are proposed to be coextensive physical phenomena with which particular sorts of mental phenomena may be identified. Generally, his functional role treatment of mental phenomena has been viewed as paving the way to a more plausible form of materialism rather than being opposed to it; see eg.D. Dennett, introduction, and D.M. Rosenthal (ed.),

where H. Putnam (1) is presented in a section entitled 'Functional materialism'. This, as is evident, is concurred with in the present discussion.

31. An example of the concern of materialists to distinguish their position from that of a doubt-aspect theory is provided in J.J.C. Smart (2), p.94. A recent advocate of such a theory is R.J. Hirst. See R.J. Hirst, ch.7.

32. See, eg., J.J.C. Smart (2), p.11, and D.M. Armstrong (1), pp 10, 13.

33. J.J.C. Smart (2), p.44.

Chapter 2

1. See W. Sellars (1), ch.1.

2. On this point see eg., W. Von Leyden, ch.1, sec.5. The historical background to the concentration upon Primary Qualities is further expounded in C.W.K. Mundle (1), ch.3, esp. p.48. (See also note 4).

3. See J.J.C. Smart (2), p.65.

4. ibid p.64. It may be noted, in this connection, that another reason that has been advanced for the physical sciences viewing the world as devoid of the Secondary Qualities as we experience them is that, as Armstrong notes in D.M. Armstrong (1), p.271, it has appeared both to 'philosophers and scientists' that those qualities, as experienced, 'qualify items in the mind of the perceiver' - see, eg., C.W. K. Mundle (1), ch.3, and J.J.C. Smart (2), ch.4. The view taken in the present discussion, however, is that it is not necessary to accept this. Rather, as has been argued in K. Campbell, it is possible to claim that Secondary Qualities as they are experienced are the way certain physical qualities in the environment appear to us. This will be argued

in Chapter 11 below. For the present, the point remains that insofar as the physical sciences permit us the experience of anything in the environment when we experience Secondary Qualities, the items concerned are ones specified in Primary Quality terms only.

5. J.J.C. Smart (2), p.66.

6. See, eg., L.C. Holborrow and D.H. Mellor.

7. Eg., C.W.K. Mundle (1), p.59 regards the involvement of causation in our notion of sense perception as 'a truism'. The contrast with extra-sensory perception, as in the case of someone apparently able to preceive the world without their senses being affected, is made in G.N.A. Vesey, p.75. All received accounts of sense perception do, it appears, acknowledge the role of causal processes.

8. See eg., R. Rorty (1), ch.2; R. Rorty (2), and J. Cornman (1), pp 170-175.

9. Leibniz's Law has certainly been generally recognised as a principle that must be respected in formulating materialism, following from Smart's insistence that when he says sensations are identical with brain processes, he is asserting a 'strict identity', i.e., one in accordance with Leibniz's Law. See J.J.C. Smart (1), p.57. See also T. Nagel, sec.2, and R. Rorty (2), sec.3. The need for alternative principles of identity has, however, sometimes been suggested and discussed, as in J. Cornman (5) and (1), but this is a matter of considerable controversy, and understandably so given the ability to derive Leibniz's Law from the principle of non-contradiction.

10. J.J.C. Smart (1), p.62.

11. T. Nagel, p.100.

12. See G. Ryle, esp. chs. 1 and 3.

13. For confirmation of Smart's early behaviourism with regard to mental phenomena other than sensations and similar items, see D.M. Armstrong (1), ch.6, sec.4. The fact that his 'Sensations and brain processes' seeks to support the views of U.T. Place, whose behaviourism in regard to these other mental phenomena is evidenced below, is further confirmation - see J.J.C. Smart (1), p.53. See also J.J.C. Smart (2), pp 88-9.

14. U.T. Place, pp 42-43.

15. See U.T. Place, esp. p.43, on this, and also J.J.C. Smart (1). Smart, of course, places the emphasis on sensations.

16. This is a view that may be ascribed to all those who advocate some sort of causal role analysis of mental phenomena, as described below.

17. K.V. Wilkes, p.24. See also, eg., J. Fodor (1), pp 3-6.

18. See above, pp 30-31.

19. Turing machine functionalism is introduced in H. Putnam (3), and developed in H. Putnam (1) and (2).

20. Turing machine functionalism is criticised in J. Fodor (1), ch.3, and in D. Dennett, introduction.

21. For all their disagreements, Fodor, Dennett, Putnam and Searle, for example, seem agreed on this point. See J. Fodor (1), D. Dennett, H. Putnam, op cit, and J. Searle (1), esp. ch.10.

22. See above, p.15.

23. D.M. Armstrong (1), p.41.

24. D. Dennett, p.94.

25. See eg., D.M. Armstrong (1), pp 40-41 and J. Searle (1), p.1.

26. See Armstrong, loc cit, and also J. Searle (1), pp 16-17.

27. A contrast here may be drawn in particular between the position of Dennett, on the one hand, and Searle and Fodor on the other; eg., cf. Dennett p.101 and pp 122-5, and Searle (1), ch.1, sec. 3 (5). We will in Chapter 7 grant a role to the notion of representation in explaining belief, but this is only in support of an argument that is later rejected.

28. See D.M. Armstrong (3), ch.5, sec.3.

29. J. Searle (1), p.26.

30. For an exposition of intensionality see K.V. Wilkes, pp 6-8, and J. Searle (1), pp22-4.

31. Dennett is a major case in point, as in D. Dennett, ch.1.

32. An example of an intensional idiom that does not occasion discussion of intentionality is the locution 'it is necessary that'.

33. See J. Searle (1), p.24.

34. This point is made in K.V. Wilkes, p.16, but is not defended against the possibility that some parts of the physical sciences might need recourse to intensional idiom.

35. ibid, ch.2.

36. ibid, ch.4, pp 54-66.

37. See above, p.29.

38. D.B. Locke (1), p.218.

39. An expression of Ayer's applied to behaviourism, and similarly, in D.B. Locke (1), it is asked whether this is what a materialist must pretend.

Chapter 3

1. D.M. Armstrong (1), p.78.

2. ibid, p.275.

3. J.J.C. Smart (1), p.61.

4. See D.M. Armstrong (1), chs. 10, 11; D.M. Armstrong (2).

5. See R.M. Chisholm (1).

6. See J. Cornman (1), ch.7, and his 'summary and concluding remarks'.

7. M.E. Levin, ch.4.

8. This will be argued in Chapter 4 below, based upon J.J.C. Smart (1) and J.J.C. Smart (2), ch.4.

9. J.J.C. Smart (4), p.107.

10. See below, Ch.4, Sec.4.

11. See R.M. Chisholm (1), ch.8.

12. See, eg., D.M. Armstrong (2), p.26, and D.M. Armstrong (1), p.217.

13. Armstrong is explicitly committed to this - see eg., D.M. Armstrong (1), (2), loc cit.; while in R.M. Chisholm (1), chs. 8, 10, perceptual experience is equated with 'sensing' (see Ch.4 in the present work), which may occur whether or not something is perceived.

14. B. Russell (2), p.162.

15. H.H. Price, pp 3-4.

16. See above, Ch.2, Sec.10, esp. p.62.

17. A point first introduced in Ch.2, Sec.10, also.

18. See B. Russell (1), chs. 1-4.

19. For a discussion of these alternative renderings of the representative theory, see J.R. Smythies.

20. See D.M. Armstrong (2), and also D.M. Armstrong (1), pp217-218 for a re-statement of the position.

21. This is most explicit in B. Russell (1), p.19.

22. Ch. 11, below.

23. B. Russell (1), p.23.

24. ibid, p.26.

25. ibid, p.25.

26. H.H. Price, p.3.

27. ibid, p.21.

28. B. Russell (1), p.25.

29. H.H. Price, p.25. On perceptual consciousness, see also pp 146, 165.

30. D.M. Armstrong (1), p.217.

31. H.H. Price, p.145.

32. D.M. Armstrong, ch.6, sec.11, esp. pp 114-115.

33. ibid, p.115

Chapter 4

1. D.M. Armstrong (1), p.217. See also ch.10, secs. 1, 2, 4, and 6, esp., and cf. D.M. Armstrong (2), ch.9.

2. D.M. Armstrong (2), p.83.

3. loc. cit. See also D.M. Armstrong (1), pp 216-217.

4. This, at least, is the solution to the problem offered in D.M. Armstrong (2), p.114. The problem appears to be neglected in D.M. Armstrong (1).

5. G. Pitcher, p.74.

6. Mention has already been made of G. Pitcher; see also articles in F.N. Sibley (ed.).

7. R.J. Hirst, p.224.

8. ibid, p.223.

9. D.M. Armstrong (1), p.276.

10. The account of perceptual beliefs referred to appears in D.M. Armstrong (1), ch.11.

11. This objection to the Belief Analysis is made, eg., in D.B. Locke (3), p.29, and in F.N. Sibley (ed.), p.24.

12. D.M. Armstrong (1), p.275.

13. ibid, p.276.

14. J.J.C. Smart (2), p.80.

15. See G. Pitcher, pp 202-3

16. See above, Ch.3, Sec. 5, esp. p.82.

17. See D.M. Armstrong (1), p.203.

18. ibid, ch.10, sec.5, esp. p.228.

19. See F.N. Sibley (ed.), esp. J.W. Roxbee-Cox, 'An analysis of perceiving in terms of the causation of beliefs'.

20. D.M. Armstrong (1), p.223.

21. J.R. Smythies, p.250.

22. See above, p.56.

23. Loc cit.

24. D.M. Armstrong (1), p.301.

25. ibid, p.80.

26. W. Kneale, p.298.

27. The Revisionary Approach was introduced in Ch.2, Sec.12 above.

28. See R.J. Hirst, pp 31-2.

29. A.J. Ayer (2), pp 161-2.

30. See R.M. Chisholm (1), ch.10.

31. He grants that an analysis in terms of discriminatory behaviour is insufficient in J.J.C. Smart (2), p.82. Evidence of his commitment to the Adverbial Analysis will appear later in this Chapter.

32. Contrary to Ch.3, Sec. 6 above.

33. J.J.C. Smart (1), p.61.

34. R.J. Hirst, p.33.

35. See above, p.29.

36. J.J.C. Smart (1), p.61.

37. See R.M. Chisholm (1), ch.4, esp., pp 50-3, and R.M. Chisholm (2), pp.34-7.

38. See above, Ch.3, Sec.6, esp. p.86.

39. See F. Jackson, esp. p.64.

Chapter 5

1. D.M. Armstrong (1), p.78. Armstrong bases his opinion of EM on an extreme construal of P. Feyerabend (2). He reads this as implying a total repudiation of mental phenomena, whereas Feyerabend makes clear that this is only one option available to the advocate of EM.

2. W.V. Quine (2), p.213.

3. id.

4. See R.Rorty (2), esp. sec.3.

5. ibid, p.179.

6. P. Feyerabend (1), p.145.

7. See P. Feyerabend (2).

8. See W. Lycan and G. Pappas, esp. p.151.

9. R. Rorty (1), p.119.

10. See W. Lycan and G. Pappas pp 155-6.

11. For an account of this and its main proponents, see N.U. Salmon ch.1, sec.1.

12. In private correspondence.

13. K. Donnellan, esp. sec.3.

14. D.B. Locke (2), p.101.

15. S. Kripke, p.340.

16. id.

17. See L. Wittgenstein (1), esp. secs. 258, 265.

Chapter 6

1. See W. Sellars (2).

2. R. Rorty (3), p.229. It is in this article that he accuses opponents of EM of subscribing to the 'Myth of the Given', although the influence of Sellars is also acknowledged in R. Rorty (2), pp.176-7, in footnotes.

3. R.J. Bernstein, p.218.

4. This is confirmed by the quotation from Bernstein that is the subject of note 12 below.

5. See W.V. Quine (2).

6. J. Cornman (4), p.61; see also J. Cornman (1), p.158.

7. R. Rorty (3), p.227.

8. J. Cornman (3), p.35.

9. See R. Rorty (2), (3).

10. As evidenced by J. Cornman (1), (2), (3), and M.T. Thornton.

11. J. Cornman (1), p.176.

12. J. Bernstein, p.218.

13. See J. Cornman (2).

14. ibid, p.231.

15. W. Sellars (2), p.253.

16. loc cit.

17. H.H. Price, p.3.

18. R. Rorty (1), p.162.

19. W.V. Quine (2), p.210.

20. See H. Putnam (4), ch.1.

21. D.W. Hamlyn, p.34.

22. See Ch. 9.

23. For an account of Descartes' and Leibniz's arguments see, eg., D.W. Hamlyn, ch.2., sec.a.

24. See, eg., D.M. Armstrong (1), p.101, and K. Lehrer, pp 81, 85.

25. Armstrong and Lehrer may again be cited, along with others, eg., K.V. Wilkes, ch.1.

26. See N. Kemp-Smith (tr.), pp.129-158.

27. ibid, p.129.

28. P.F. Strawson, p.99.

29. For a discussion of this, see D.W. Hamlyn, ch.2, sec.b., esp. p.35.

Chapter 7

1. W. Sellars (2), sec.1.
2. See D.M. Armstrong (2).
3. ibid, pp 88-9.
4. W. Sellars (2), p.256.
5. B. Russell (1), p.79.
6. See D.M. Armstrong (3), ch.3.
7. See B. Russell (2), 'The philosophy of logical atomisim'.
8. ibid, p.179.
9. In regard to Armstrong's opposition to the idea that the holding of belief presupposes language, see, again, D.M. Armstrong (3), ch.3; it is also, of course, implied by D.M. Armstrong (1), ch.11. Justification for Armstrong's position is presented in Sec.7 of the present Chapter.
10. See D.M. Armstrong (3), ch.5, esp. sec.2, where logical atomism is the inspiration for an analogous account of belief elements, conceived in non-linguistic terms, as representing constituents of the world.
11. See esp.,D.M. Armstrong (3), p.32.
12. This point was originally made in Ch.3, Sec.4 above.
13. This relevant Chapter is Ch.10.
14. See, eg.,the criticism of verificationism in K.R. Popper, ch.1, sec.6, and C.W.K. Mundle (2), sec.3.
15. W. Sellars (2), p.258.
16. The observations about Hegel here are based on the account in P. Singer, ch.4.

17. ibid, pp 53-4.

18. N. Kemp-Smith, p.93

19. There is evidence of this rejection, eg., in B. Russell (1), ch.14.

20. ibid, ch.10.

21. ibid, p.58.

22. See, eg., H. Staniland, ch.2, for a discussion of abstractionism as it features in Locke, an early Empiricist exponent of the doctrine; and P. Geach, esp. sec.10, for a discussion of more recent exponents, Russell and Price.

23. As evidenced by the last cited works.

24. See Chs. 9 and 10.

25. W.V. Quine (3), p.83.

Chapter 8

1. cf. Ch.8, Sec.7 below.

2. K. Baier, p.97.

3. See Ch.5, Sec.8 above, in regard to EM as understood here. Smart's topic-neutral description account of sensation reports (previously discussed) is directed to showing that they may be reports of brain processes - See Ch.1, Sec.6, and Ch.3, Sec.2, above.

4. K. Baier, p.98.

5. id.

6. id.

7. id.

8. ibid, p.102.

9. See D.M. Armstrong (1), p.102.

10. See K. Baier, p.97.

11. Ch.2, Sec.7.

12. See D.M. Armstrong (1), ch.6, sec.10.

13. For a collection of papers discussing the Ontological Argument, see R. Hick and A. McGill (eds.).

14. L. Wittgenstein (1), sec.246.

15. id.

16. Armstrong refers to this in D.M. Armstrong (1), p.106.

17. id.

18. ibid, p.101.

19. See L. Wittgenstein (1).

20. eg., J.J.C. Smart (1), p.54, tentatively ascribes this view to Wittgenstein.

21. L. Wittgenstein (1), sec.246.

22. See J.J.C. Smart (1), p.56.

23. Quine's critique of analyticity was presented in W.V. Quine (4), and is endorsed, eg., by Rorty, as in R.Rorty (1), esp. ch.4.

24. See W.V. Quine, op cit.

25. ibid, p.43.

26. R. Rorty (1), p.175.

27. A strong recent defender of the analytic-synthetic distinction in the face of Quine's criticisms is Searle- see J.R. Searle (2), ch.1, sec.2.

Chapter 9

1. For an account of this theory see, eg., W. Sellars (2), and K. Lehrer, ch.4, pp 76–78.

2. This conception of knowledge is ancient - see, eg., R.M. Chisholm (2), ch.1, and D.M. Armstrong (3), ch.11, sec.1. A recent advocate is A.J. Ayer, as in A.J. Ayer (1), esp. p.35.

3. A recent opponent of the standard conception on the grounds that it engenders a justificatory regress and so precludes possession of knowledge, is Armstrong - see D.M. Armstrong (2), p.120.

4. id.

5. See D.M. Armstrong (2), ch.14.

6. ibid, ch.1.

7. On this point see, eg., A. Kenny, ch.10. According to W. Sellars (2), p.300, 'Empirical knowledge is a self-correcting enterprise which can put any claim in jeopardy, though not all at once'. This typifies the modern response to scepticism.

8. Neurath's analogy has been brought to prominence by Quine. See, eg. W.V. Quine(3).

9. For a fuller account of this, see D.W. Hamlyn, ch.2, sec.b.

10. H. Putnam (4), p.38.

11. A philosopher Putnam may have had in mind is D. Dennett - see D. Dennett pp 17-18 - who has written that ' a capacity to believe would have no survival value unless it were a capacity to believe truths', (ibid, p.17).

12. Our criticism of the Analytical Approach in Ch.4 above, provides the reason for concluding that ordinary language descriptions of perceptual experience commit us to non-physical entities.

13. P. Feyerabend (1), p.143.

14. D. Dennett, op cit, concurs strongly with this.

15. A point made by R. Trigg in discussion.

16. For further discussion of this, see Ch.10 below.

17. H. Putnam (4), p.40.

18. ibid ch.2. Quine, of course, is the main originator of such views.

19. See N. Kemp-Smith, secs. 15-27, and Ch.10, Sec.3 of the present discussion.

Chapter 10

1. W. Sellars (2), p.303.

2. B. Russell (2), 'The philosophy of logical atomism.

3. L. Wittgenstein (2).

4. See ch.7 above, esp. Secs. 3 and 4.

5. For an explanation of Wittgenstein's appeal to simple objects, see A. Kenny ch.5.

6. eg. L. Wittgenstein (1), sec.47.

7. D. Davidson certainly seems to disagree with this assumption; evidently holding that our knowledge of language should be explained in terms of implicit knowledge, as in D. Davidson (1).

8. This point was made in Ch.2, Sec.2 above.

9. See Ch.7, Sec.3 above.

10. Ch.9, Sec.3 above, considered the problems attaching to the attempt to characterise immediate experience, and invoking what is indubitably present would beg the question in the present context.

11. The following argument is inspired by the definition of Observation Terms in J. Cornman(1), ch.2, and J. Cornman (4), as interpreted by T. Gulesarian, esp. p.284.

12. The failure of 'phenomenalism', the term used to describe the view that talk about physical objects can be translated into statements about immediate experience,has been described in manyworks - see eg., D.W. Hamlyn, pp.173-177, R.J. Hirst, ch.5, (esp. sec.6, in relation to the objections we have emphasised), and C.W.K. Mundle (1), pp.67-72.

13. See N. Kemp-Smith (tr.), esp. sec. 16.

14. See P.F. Strawson (1), ch.3, sec.4, esp. p.100.

15. R. Rorty (2), p.187. To be precise, he says that he wishes to treat as won the battle against the idea 'that there is an activity which can reasonably be called 'awareness' prior to the learning of language'.

16. W. Sellars (2), p.289.

17. R. Rorty (1), p.181.

18. G. Romanos, p.129; see also D.W. Hamlyn, p.121.

19. An influential exponent of the need for a holistic as opposed to atomistic approach to linguistic meaning is Davidson. See D. Davidson (1), esp. p.308. He is endorsed, eg., by Rorty in R. Rorty (1), ch.6.

Chapter 11

1. See Ch.7, esp. Sec.6, above.

2. See above, Ch.4, Sec.7, esp. pp 113-115.

3. See above, Ch.4, Sec.8.

4. N. Kemp-Smith (tr.), p.93.

5. ibid, p.65.

6. See Ch.2, Sec.3, above.

7. For evidence of Rorty's rejection of the Kantian view, see R. Rorty (1), ch.3, sec.3; and for his rejection of acquaintance, see his espousal of 'epistemological behaviourism', ibid, ch.4, sec.2.

8. R. Rorty (1), p.154.

9. That this is what Hegel did is explained in P. Singer, ch.4, esp. p.72.

10. See R. Rorty (1), ch.4; here Rorty's 'aim' of undermining 'the readers confidence... in 'knowledge' as something about which there ought to be a 'theory'' (p.7), is pursued in particular by an attack on Kant. He contends that 'the Kantian picture of concepts and intuitions getting together to produce knowledge, is needed to give sense to the idea of 'theory of knowledge' as a specifically philosophical discipline, distinct from psychology', p.168.

11. R. Rorty (4), p.4.

12. See N. Kemp-Smith (tr.), secs. 1-8.

13. As was argued above in Ch.9, Sec.4.

14. One name that arises in connection with other criticism of the Kantian view is that of Davidson, who has challenged 'the very idea' of a conceptual scheme - see D. Davidson (2), and pronounced

the scheme - content distinction, as exemplified by the distinction between concepts and intuitions, a third untenable 'dogma of empiricism' (ibid, p.189). His argument seems to be based on the premise that it is only possible to speak of an organising conceptual scheme, a set of concepts or framework of beliefs, giving structure to experience, or specific awareness of content, if alternative such schemes are possible. He then criticises the idea of alternative schemes on the grounds that this implies there may be different languages that are either wholly or in part untranslatable into each other; and, against this,'we cannot make sense of total failure' (of translatability), ibid, p.185, and partial failure 'fares no better', ibid, p.197. To do justice to Davidson's critique would require discussion at some length, however, which it is not proposed at this stage to engage in; but it may perhaps be ventured that it may be avoided by refusing to accept the idea that an organising system of concepts implies the possibility of non-intertranslatable languages, and that if we refuse to admit a distinction between scheme and content we preclude what appears the most satisfactory representation of perceptual experience that may be suggested.

15. As is indicated in Ch.4, Sec.1, above.

16. See D.M. Armstrong (1), ch.6, sec.9, esp. p.94.

17. C.W.K. Mundle (1), p.44.

18. Ch.10, Sec.3, above.

19. This was first discussed above, p.97.

20. This has been drawn attention to in J.J.C. Smart (2), ch.4, esp. pp 69-71, in C.W.K. Mundle (1), ch.9, and in K. Campbell. Campbell himself proposes a view of colours according to which,

in seeing a particular colour quale we are, in any given case, seeing one out of a varied class of physical phenomena, including different wavelength compositions of electromagnetic radiation, and his view has influenced the present discussion.

21. See above, Ch.10, Sec.2.

22. For a discussion of this point, see J.J.C. Smart (2), pp 72-75.

23. ibid, p.72-3.

24. See above, p.56, and cf. pp 98-99.

25. P.M. Churchland, ch.1.

26. ibid, p.37.

27. ibid, p.11.

28. ibid, p.7.

29. ibid, p.31.

## Bibliography

Armstrong, D.M. (1), A materialist theory of the mind, London: Routledge and Kegan Paul, 1968.

Armstrong, D.M. (2), Perception and the physical world, London: Routledge and Kegan Paul, 1961.

Armstrong, D.M. (3), Belief, truth and knowledge, Cambridge: CUP, 1973.

Ayer, A.J. (1), The problem of knowledge, Harmondsworth: Penguin, 1972. First published 1956.

Ayer, A.J. (2), Language, truth and logic, Harmondsworth: Penguin, 1972. First published 1936.

Baier, K., 'Smart on sensations', in C.V. Borst (ed.). Reprinted from The Australasian Journal of Philosophy, 40, 1962.

Bernstein, R.J., 'The challenge of scientific materialism', in D.M. Rosenthal (ed.). Reprinted from The International Philosophical Quarterly, 8, 1968.

Borst, C.V. (ed.), The mind-brain identity theory, London: Macmillan, 1970.

Campbell, K., 'Colours', in R. Brown and C.D. Rollins (eds.), Contemporary philosophy in Australia, London: Routledge and Kegan Paul, 1969.

Chisholm, R.M. (1), Perceiving: a philosophical study, Ithaca, New York: Cornell University Press.

Chisholm, R.M. (2), Theory of knowledge, Englewood Cliffs: Prentice Hall, 1966.

Churchland, P.M., Scientific realism and the plasticity of mind, Cambridge: CUP, 1979.

Cornman, J.W. (1), Materialism and sensations, New Haven: Yale University Press, 1971

Cornman, J.W. (2), 'Materialism and some myths about some givens', The Monist, 1973

Cornman, J.W. (3), 'On the elimination of 'sensations', and sensations', Review of Metaphysics, 22, 1968

Cornman, J.W. (4), 'Mental terms, theoretical terms, and materialism', Philosophy of Science, 35, 1968.

Cornman, J.W. (5), 'The identity of mind and body', in D.M. Rosenthal (ed.). Reprinted from The Journal of Philosophy, 59, 1962.

Cox, R.W. Roxbee-, 'An analysis of perceiving in terms of the causation of beliefs', in F.N. Sibley (ed.).

Davidson, D. (1), 'Truth and meaning', Sythese, 17, 1967.

Davidson, D. (2), 'On the very idea of a conceptual scheme', in D. Davidson, Inquiries into truth and interpretation, Oxford: OUP, 1984. Reprinted from Proceedings and Addresses of the American Philosophical Association, 47, 1974.

Dennett, D., Brainstorms, Harvester, 1978

Donnellan, K., 'Reference and definite descriptions', in S.P. Schwartz (ed.), Naming, necessity, and natural kinds, London: Cornell University Press, 1977. Reprinted from The Philosophical Review, 75, 1966.

Feyerabend, P.K. (1), 'Materialism and the mind - body problem', in C.V. Borst (ed.). Reprinted from The Review of Metaphysics, 18, 1963.

Feyerabend, P.K. (2), 'Mental events and the brain', in D.M. Rosenthal (ed.). Reprinted from The Journal of Philosophy, 69, 1963.

Fodor, J.A. (1), Representations, Brighton: Harvester, 1981.

Fodor, J.A. (2), 'Materialism', in D.M. Rosenthal (ed.). Reprinted from J.A. Fodor, Psychological explanation, New York: Random House, 1968.

Geach, P.T., Mental acts, London: Routledge and Kegan Paul, 1971. First published 1957.

Gulesarian, T., 'On two aspects of Eliminative Materialism', Philosophy of Science, 38, 1971.

Hamlyn, D.W., The theory of knowledge, London: Macmillan, 1974. First published 1970.

Harré, R., 'Joynson's dilemma', Bulletin British Psychological Society, 24, 1971.

Hick, R., and A. McGill (eds.), The many-faced argument, London: Macmillan, 1968.

Hirst, R.J., The problems of perception, London: Routledge and Kegan Paul, 1959.

Holborow, L.C., 'Materialism and phenomenal qualities', I, Proceedings of the Aristotelian Society, supp. vol. 67, 1973.

Jackson, F., Perception: a representative theory, Cambridge: CUP, 1977.

Kenny, A., Wittgenstein, Harmondsworth: Penguin, 1973.

Kneale, W., 'Critical notice of 'A materialist theory of the mind'', Mind, 78, 1969.

Kripke, S., 'Naming and necessity', in G. Harman and D. Davidson (eds.), Semantics of natural language, Dordrecht: Reidel, 1972.

Lehrer, K., Knowledge, Oxford: OUP, 1974.

Levin, M.E., Metaphysics and the mind-body problem, Oxford: OUP, 1979.

Locke, D.B. (1), 'Must a materialist pretend to be anaesthetised?', Philosophical Quarterly, 1971.

Locke, D.B. (2), Myself and others, Oxford: OUP, 1968.

Locke, D.B. (3), Perception and our knowledge of the external world, London: Routledge and Kegan Paul, 1967.

Lycan, W.G., and G.S. Pappas, 'What is Eliminative Materialism?', Australasian Journal of Philosophy, 50, 1972.

Mellor, D.H., 'Materialism and phenomenal qualities', II, Proceedings of the Aristotelian Society, supp. vol. 67, 1973.

Mundle, C.W.K. (1), Perception: facts and theories, Oxford: OUP, 1971.

Mundle, C.W.K. (2), A critique of linguistic philosophy, London: Glover and Blair, 1979. First published OUP, 1970.

Nagel, E., The structure of science, New York: Harcourt, Brace, 1961.

Nagel, T., 'Physicalism ', in D.M. Rosenthal (ed.). Reprinted from The Philosophical Review, 74, 1965.

Oppenheim, P. and H. Putnam, 'Unity of science as a working hypothesis', in H. Feigl (ed.), Minesota studies in the philosophy of science, vol.2, Mineapolis: University of Minesota, 1958.

Pitcher, G., A theory of perception, New Jersey: Princeton University, 1971.

Place, U.T., 'Is consciousness a brain process?', in C.V. Borst (ed). Reprinted from The British Journal of Psychology, 47, 1956.

Popper, K.R., The logic of scientific discovery, London: Hutchinson, 1977. First published 1934.

Price, H.H., Perception, London: Methuen, 1961. First published 1932.

Putnam, H. (1), 'The nature of mental states', in D.M.Rosenthal (ed.). Reprinted from W.H. Capitan and D.D. Merrill (eds.), Art, mind and religion, Pittsburgh: University of Pittsburgh, 1967.

Putnam, H. (2), 'The mental life of some machines' in H. Putnam, Mind, language and reality, philosophical papers vol.2, Cambridge: CUP, 1975 (reprint)

Putnam, H. (3), 'Minds and machines', in H. Putnam, Mind, language and reality, philosophical papers vol. 2, Cambridge, CUP: 1975 (reprint).

Putnam, H. (4), Reason, truth and history, Cambridge: CUP, 1981.

Quine, W.V. (1), Ontological relativity and other essays, New York: Columbia University Press, 1969.

Quine, W.V. (2), 'On mental entities', in The ways of paradox and other essays, New York: Random House, 1966.

Quine, W.V. (3), Word and object, Cambridge, Mass.: The M.I.T. Press, 1960.

Quine, W.V. (4), 'Two dogmas of empiricism', in W.V. Quine, From a logical point of view, London: Harper and Row, 1963. First published, Harvard University Press, 1953.

Romanos, G., Quine and analytic philosophy: the language of language, Cambridge, Mass.: The M.I.T. Press, 1983.

Rorty, R. (1), Philosophy and the mirror of nature, Oxford: Blackwell, 1980.

Rorty, R. (2), 'Mind-brain identity, privacy and categories', in D.M. Rosenthal (ed). Reprinted from The Review of Metaphysics, 19, 1965.

Rorty, R. (3), 'In defence of Eliminative Materialism', in D.M. Rosenthal (ed.). Reprinted from the Review of Metaphysics, 24, 1970.

Rorty, R. (4), Consequences of Pragmatism, Harvester, 1982.

Rosenthal, D.M. (ed.), Materialism and the mind-body problem, Englewood Cliffs: Prentice-Hall, 1971.

Russell, B. (1), The problems of philosophy, Oxford: OUP, 1972. First published 1912.

Russell, B. (2), Logic and knowledge, essays 1901 - 1950, R.C. Marsh (ed.), London: Allen and Unwin, 1984. First published 1956.

Ryle, G., The concept of mind, Harmondsworth: Penguin, 1973 First published 1949.

Salmon, N.U., Reference and essence, Oxford: Blackwell, 1982.

Searle, J.R. (1), Intentionality, Cambridge: CUP, 1983.

Searle, J.R. (2), Speech Acts, Cambridge: CUP, 1969.

Sellars, W. (1), Science, perception and reality, London: Routledge and Kegan Paul, 1963.

Sellars, W. (2), 'Empiricism and the philosophy of mind', in H. Feigl (ed.), Minesota studies in the philosophy of science, vol. 1, Minesota: University of Minesota Press, 1956.

Sibley, F.N. (ed.), Perception: a philosophical symposium, London: Methuen, 1971.

Singer, P., Hegel, Oxford: OUP, 1983

Smart, J.J.C. (1), 'Sensations and brain processes', in D.M. Rosenthal (ed.). Reprinted from The Philosophical Review, 68, 1959.

Smart, J.J.C. (2), Philosophy and scientific realism, London: Routledge and Kegan Paul, 1963.

Smart, J.J.C. (3), 'Materialism', in C.V. Borst (ed.). Reprinted from The Journal of Philosophy, 60, 1963.

Smart, J.J.C. (4), 'Brain processes and incorrigibility', in C.V. Borst (ed.). Reprinted from The Australasian Journal of Philosophy, 40, 1962.

Smith, N. Kemp- (tr.), Immanuel Kant's critique of pure reason, London: Macmillan, 1973. First published 1929.

Smythies, J.R., 'The representative theory of perception', in J.R. Smythies (ed.), Brain and mind, London: Routledge and Kegan Paul, 1965.

Staniland, H., Universals, London: Macmillan, 1973.

Strawson, P.F., Individuals, London: Methuen, 1974. First published 1959.

Thornton, M.T., 'Ostensive terms and materialism', The Monist, 1973.

Vesey, G.N.A., Perception, London: Macmillan, 1971.

Von Leyden, W., Seventeenth Century Metaphysics, London: Duckworth, 1968.

Wilkes, K.V., Physicalism, London: Routledge and Kegan Paul, 1978.

Wittgenstein, L. (1), Philosophical investigations, G.E.M. Anscombe (tr.), Oxford: Blackwell, 1974. First published 1953.

Wittgenstein, L. (2), Tractatus logico - philosophicus, D.F. Pears and B.F. McGuiness (trs.), London: Routledge and Kegan Paul, 1961. First published, under different translation, 1922.